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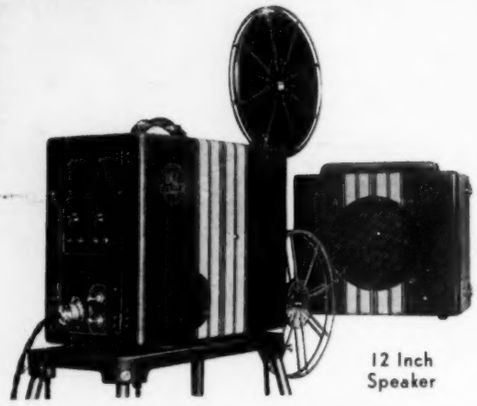

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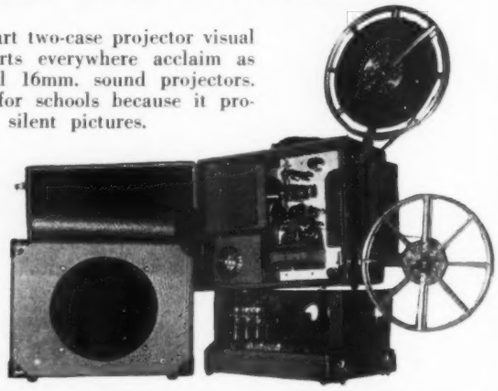

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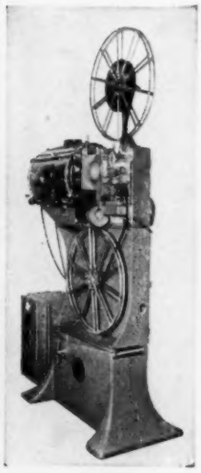

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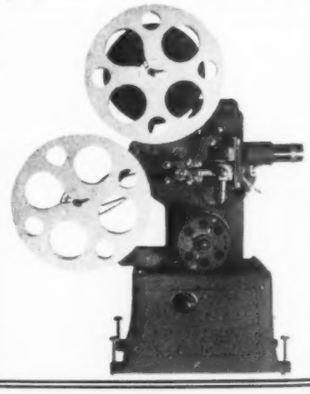

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(Courtesy U. S. Department of the Interior)

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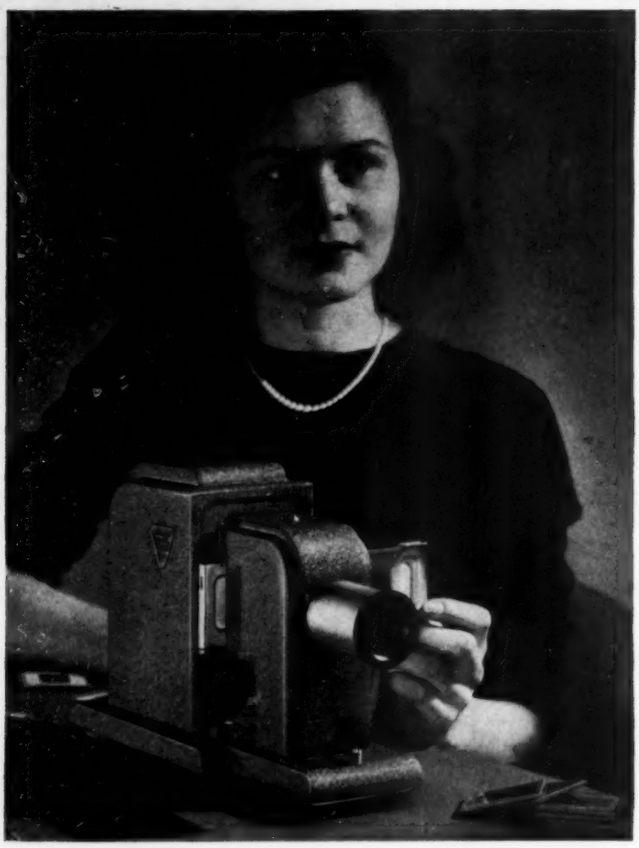

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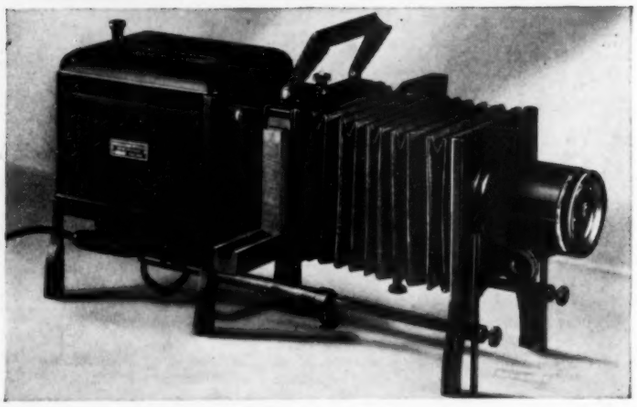

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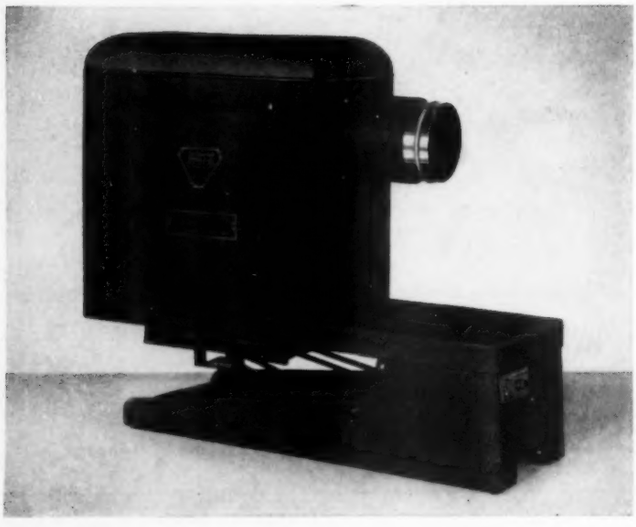

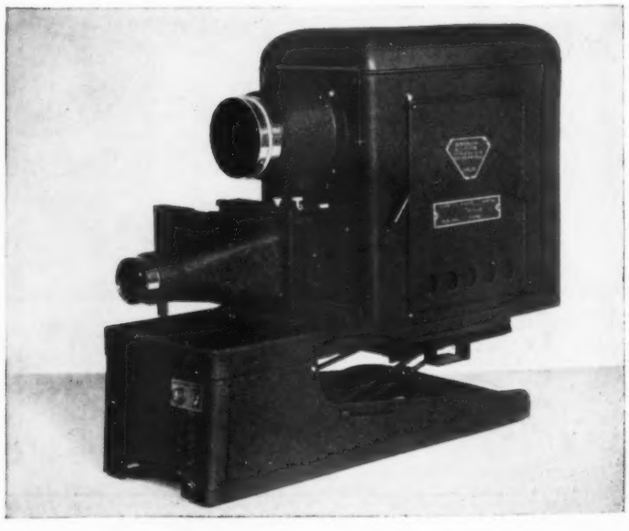

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Diversitorials

A Letter to the U. S. Post Office

AT THE suggestion and example of our good friend, B. A. Aughinbaugh of Ohio, we personally have sent to the Classification Division, U. S. Post Office Department, Washington, D. C., the following letter:

> "We wish to place on record an application to have the postal rate on exposed-and-developed, non-inflammable, educational motion picture film made the same as the present book rate. We base our application on the fact that it is the content, not the physical format, which determines the classification of 'books.' Catalogs, for example, may look like books but the postal regulations say they are catalogs. Educational motion pictures may not look like books but they have the same content as books—hence by implication the educational motion picture is a 'book.'"

The advantages to the visual field of a lowered postal rate on teaching films are obvious. Enough thousands of letters of the above import and purpose would mightily increase the chances of such a change. Such letters will implement strongly the D V I Resolution now driving toward the same goal. Why not get out the old pen and paper right now?

A Matter of Typography

WE ARE experimenting a bit this month with the set-up of one of our regular departments, "The Literature of Visual Instruction" (Pages 66-68). Titles of articles cited, with all reference data on each, are grouped together at the beginning, forming a *quasi* Table of Contents, or Index to the literature of the month. Under each entry, that receives extended comment by the departmental editor, is a reference in parentheses to a numbered paragraph. These paragraphs follow the Index, in numerical order, with the article title repeated for each.

The change aims to serve a twofold purpose. First, all readers can see at a comprehensive glance, within the compass of a half page or so, the total utterance of the field for that month, and may read Miss Schneider's comments in any order dictated by interest or inclination. Second, for those readers interested chiefly in special aspects of the field, the new arrangement greatly facilitates selection and directs these readers instantly to the subject matter that particularly appeals to them. Whether the new arrangement is retained, or the former is resumed, will be determined by the tenor of our mail in coming days, weeks or months.

At Least a Second Term

THE Atlantic City meeting on February 24 to 26 gives every promise of being a notable success, thanks to the excellent program, able management and skillful promotion achieved by the present administration of the Department. We are already disturbed by the thought that this administration's term is supposedly half over already. It has gathered a deal of momentum in its six months. Why lose this *elan,* as usual, at the June elections? Why not President Reed and Secretary Bowen for a second term? A "second term" is just nothing at all these days! Our vote for Reed and Bowen may be counted now!

The Program Reprinted

AND speaking of Atlantic City, the program for the D V I winter meeting regularly appears in our January issue, giving supposedly adequate "advance notice" to allow readers to lay plans to attend. There is, however, a surprisingly widespread tendency among our "last-minute-men" to rely on the February issue for this information. In deference to this worthy minority we reprint the program, exactly as in January, on page 71 of this issue. N. L. G.

The National Film Evaluation Project

progresses steadily, with the Judging Committee functioning more smoothly and efficiently than ever. The first "Film Evaluation Supplement to 1000 and One Films" (50 films evaluated on 50 F. E. Cards for 50 cents) appeared in November last. We have not space to print the enthusiasms it has evoked. To judge from the present influx of Score Cards, the second Film Evaluation Supplement (another 50 films) may appear within 60 days. And the Judging Committee is the cause of it all!

The Project is becoming more ambitious. We now see no reason why every film-using school should not be represented on the Judging Committee—by one or more of its faculty, serving a single year or indefinitely. Many of the present Committee are beginning their third year as active judges, scoring a minimum of 20 films a year. Hence

A Cordial Invitation

to every teacher using 10 or more films per semester with classes—in any subject, any grade, anywhere in the 48 States—who is willing to score them on the Standard Score Card of the Project:

Join the national Judging Committee—at no cost, minimum effort, and maximum satisfaction to yourself in having a share in this unique service to the entire field of visual instruction.

A postcard request will bring you full information by return mail.

Statuary showing chess game between Queen Elizabeth and King Philip II of Spain.

The Factor of Selection in the Use of Visual Aids

Discussing present-day tendencies in urthinking selection of pictorial materials, with a single striking example of right teaching procedure.

DANIEL C. KNOWLTON
Professor of Education, New York University

IN a majority of cases the failure of visual aids to make an appreciable contribution to the work of the classroom is attributable to poor selection on the part of the teacher. Textbook teaching in this country has progressed to that point where textual material is subjected to the most vigorous scrutiny and appraisal. The selection of textbooks is intrusted to carefully chosen committees who devote much time and effort to the task. The relation of the textual material to the actual work to be done by the class is carefully studied by the teacher. She subjects the text to critical analysis, and weighs its possibilities from every angle. It has come to occupy such a place of importance in the scheme of instruction that she measures the success or failure of her teaching in terms of so many pages or chapters mastered by her pupils. Whether the time and energy thus expended are justified by the results is beside the point. No teacher expects to get very far with her pupils who has not at her command a vital, well-organized body of textual material. She does not deceive herself into thinking that she can "make bricks without straw." She has no illusions as to the need for carefully chosen materials rich in teaching value, if there is to be any learning.

In nine cases out of ten her attitude is just the reverse in connection with the use of visual materials. It apparently is not a matter of moment whether the picture is trivial or inconsequential, or contains but a fragment of information; it is "a picture" and for that reason great things are expected of it. She would not think of placing before her class a page of text containing a single item of information of questionable value. She is not satisfied with a series of trivial and inconsequential statements. Her demands are for something almost encyclopedic in its content and scope. Textbooks now on the market, whatever their subject matter, fairly bristle with data and generalizations. No such demand is made of a picture or visual aid. Little attention is given ahead of time to its content; none at all to the organization of that content for instructional purposes. This is all the more strange when our textbooks have attained to such a point of technical organization for instructional purposes.

Perhaps the reason for this uncritical attitude is the tendency to relegate the visual aid to a subordinate place in the scheme of instruction. Like the frosting on the cake it can be omitted if the recipe be a good one. Too often the visual material must

find a place *after* the teaching procedure has been carefully mapped out. It is the last element to be introduced, and so is the first to be discarded. On the other hand, nothing must be allowed to interfere with the textual material selected. Until visual materials are given the same opportunity to contribute to learning as has been accorded the textbooks they will continue to occupy an insignificant place in the instructional program. There will not be the same challenge for critical selection as confronts the teacher in the case of the textbook. Not all teaching calls for visual aids, but present day teaching demands the use of much more visual material than is now employed. Each teaching situation must be appraised from the standpoint of the curriculum materials likely to prove the most effective, *whatever their nature*. Visual materials must not be overlooked in such an appraisal. When this is once recognized, the same care must be exercised in selecting them as marks the selection of a bit of text.

As has already been noted, two things must be considered: the content—i.e. the actual information conveyed by the visual aid—and the organization of this data. One is just as important as the other. Perhaps organization—and this is just as true of textual material—is the more important of the two. To begin with, however, there must be something to organize. Organization on the other hand, is often a question of a flat picture against a stereograph. Again it may be a projected picture as against one incorporated in the textbook as one of its many illustrations. The advocacy by many of our leaders in the visual field of certain forms of visual aids, such as the slide or stereograph or the motion picture, has given rise to the impression that there is a preferred form of visual material. The truth is that each is most effective when used in that relationship to which it is best suited from the standpoint of content and form. Aside from its bearing on the teaching of art the uses of a painting, for example, are limited. This use may hinge upon the fact that it is the work of an artist of some particular school. It is most effective where the contribution of the artist is more or less identical with the response sought by the teacher from the pupil, but she must be clear as to what she seeks from it. A picture like "the spirit of '76" is limited to a few very specific uses. But there is still another consideration: teachers must be clear as to the *added* contribution which a picture of this sort may make to a teaching situation when embodied in slide form and projected, or if incorporated in a motion picture.

There are situations where a motion picture is the most effective form of visual aid; there are many others where the textbook illustration meets every demand. Until the teacher has compared and evaluated the results of the uses of the same picture in these many forms; until she is in a position to appraise the relationship of one form of visual aid to another, she is likely to blunder along with ineffective material. The idea that one visual aid may be substituted for another so long as it embodies the same data, has long since been exploded in the light of classroom practice. There is still a tendency to make a complicated visual aid, such as a motion picture, perform the work characteristic of simpler forms, such as the slide and map, in addition to that for which it was primarily designed. It is but additional evidence of an uncritical attitude on the part of the teacher responsible for the selection of this material.

The results which follow the introduction of carefully selected visual materials into the work of the classroom well repay the time and energy spent in the critical appraisal suggested. The other day a sixth-grade teacher showed me a photograph which at once attracted my attention. She had been presenting a series of history and geography units covering the exploration of the North American continent. She had just completed a unit on Renaissance Spain, and another on the Spaniards in the Southwest. She was planning for a study of Elizabethan England, and this was to be followed by a unit on English exploration. Although a comparative stranger to the possibilities of visual materials, she was anxious to try her hand with pictures. The picture which she proposed to use was in the form of a bit of statuary. At either end of a chessboard sat two figures. One was Queen Elizabeth, the other King Philip II of Spain. The board between them, instead of being covered with the conventional pieces so familiar to lovers of the game, was strewn with tiny ships. To one familiar with the happenings of the time it was a most illuminating presentation of the situation. Would it convey to sixth-grade boys and girls the same insight into the period?

There was much in the picture itself to warrant a favorable answer. It was the kind of a scene to arouse interest. It was one that coincided closely with the experiences of the group. The royal players, the pieces used, the possible moves, the interest of the players in the game, their own interest in games, the incentives before the winner—these were some of the focal points about which the related data might readily be assembled. What form of picture would best serve the teacher's purpose? It was agreed that the slide would serve best as the picture was to be used as a means of introducing the unit. This would enable the teacher to focus the entire attention of the class on the material. The children were permitted to comment freely upon what they saw, and to ask questions, the teacher interjecting now and then a helpful word, or suggesting helpful sources of information.

Four weeks passed. The final work of the unit was the writing of a drama which was presented before the whole school in the auditorium. Although this centered largely about the person of Francis Drake, it was the general consensus of opinion that the success of the unit was due largely to the international chess game with which it had been launched. As the diminutive Elizabeth and her Court strutted across the boards discussing her relations with "my dear cousin," the influence of the picture was constantly in evidence. This particular teacher needed no further proof of the potency of visual aids. The battle was more than half won when she made her choice.

Audio-Visual Aids and National Defense

A notable development of audio-visual materials planned for better language teaching and international understanding.

AMO DE BERNARDIS
Supervisor, Visual Education,
Public Schools, Portland, Oregon

THE people of America are giving serious thought and effort to the problems of national defense. But too many of us are inclined to believe that all we need is a large armed force and the mechanical equipment to make it effective in fighting the enemy. That is a short-sighted view and one that the people of England and France entertained—to their everlasting regret. National defense in a world of power politics requires strong allies, friends who will protect the flank and rear when the fighting is out in front. The democratic nations of Europe thought they had them but they spent more time in attempting to out-maneuver each other than they did in cementing closer and more dependable alliances. They did not realize that unless there is an honest and sincere effort to understand and help each other, allies will fall apart at the first sign of self-interest or a powerful adversary. Today no alliance in Europe, even among the Axis powers, is sincere or lasting.

For us in the western hemisphere, the tragic fate of Europe has presented a problem and taught a lesson that not even the wilfully blind can miss. We, too, must have allies and faithful ones if we are to be free from constant threat and possible attack. Fortunately, we are not entirely without them. We can depend upon the cordial relationships we have built up with our neighbors to the north. In spite of the Revolutionary War, and the War of 1812, when we were on opposite sides, Canada and the United States have lived for over a century in mutual trust and friendship.

Would that the same could be said for our relationship with the Pan-American countries to the south! Here, our history has not been one to inspire confidence in each other. The North American has been so sure of himself that he has taken Latin America too much for granted. The Latin American, on the other hand, has looked with suspicion upon the Colossus to the north and has feared the possibilities inherent in his might.

Today, we can no longer take our neighbors to the south for granted. From a purely selfish angle, if for no other, it is no longer safe for us to neglect them. We must learn to understand them and must find ways and means to convince them that they have nothing to fear from us. Unless we do this, and speedily too, we may find the Monroe Doctrine a scrap of paper to be torn up like the other public documents and national policies of the nations in Europe.

That is why the schools of Portland, a port which has had an extensive commerce and contact with Central and South America, are now undertaking a program of education designed not only to acquaint our young people with the beauties and cultures of our Latin American neighbors, but also to give them a speaking and hearing knowledge of the Spanish language. It is indeed surprising that in the western

Portland pupils learning a living language by live methods.

Locating the lands of the language studied.

half of the world which, unlike the eastern, needs but two languages—English and Spanish—to make any citizen intelligible to the other, practically no effort has been made to teach those two to every child.

It is true that our high schools have taught Spanish for many years, but this has been to only a few of our children, and at that for only a short time. Today, hardly a single graduate of our high schools or colleges can speak any modern language fluently or understand a native unless by some good fortune he has either lived in a bi-lingual home, or traveled abroad.

It is in the hope of correcting this condition that the Portland Public Schools have undertaken a somewhat revolutionary program of building a foundation of ear-and-tongue training in Spanish before the student enters the high school. Portland has created, and published, a series of phonograph records in basic Spanish which, with the accompanying manual should go far to create a substitute for a Spanish language environment. These records are distributed to the elementary schools and wherever possible to the homes of our students. In both places they serve as a self-teaching device. They can achieve satisfactory results with hardly any outside aid. If these records are played often enough, in the home, or, if in each special Spanish class or extra-curricular Spanish clubs, they form an important part of the curriculum or program, they should succeed eventually in training the ears of our children to recognize instantly a basic Spanish phraseology and with some practice to be able to repeat it.

In these days of restricted budgets, the matter of economy is of the greatest importance. To hire any large number of extra teachers is out of the question for elementary school Spanish. Few communities have the necessary funds; however, these phonograph records could easily serve as a more or less adequate substitute; if the school authorities in any community really become enthusiastic and show an interest in the project it is possible to make of this phonographic ear-training a highly effective addition to the traditional pedagogy.

Of course the Portland Schools are not satisfied merely with language training. The times demand a broader program—and one with a more immediate response. National Defense demands that we promote such an understanding of the scenic wealth, the commercial possibilities of Pan America, and the delights of their art and music, that our people and those of Pan America can really visualize each other's problem and participate in each other's culture. For this reason we stimulate the study of Pan American geography and through our music and art departments present courses in Latin American music, costumes, art products and crafts.

However, to return to the records, the crux of the problem lies in a greater mastery of the Spanish language. Nothing so compliments an individual as an effort to speak his language. Nothing so acquaints a person with the atmosphere and personality of a foreign scene as a visit to this country and a little conversation with its inhabitants. Once our students acquire a greater mastery over the spoken tongue, they will be ready for the vast tourist migrations which, in former years, were turned to Europe and Asia.

A casual glance over the subject matter of these records will make evident how practical it is. Every

Phonograph record and manual for the study of Spanish.

record contains sentences and phrases which would be of direct use to anybody visiting our neighbors to the south. Such subjects as "The Family," "Numbers, Dates, and Time," "Money and Measures," "Apartments and Hotels," "Meals," "Traffic Regulations," "Mexican Schools," etc. give an idea of the fundamental importance of the contests. Thanks to the happy collaboration of a considerable number of school people as well as local citizens, the school authorities are able to issue the entire set in an album, and a sixty-five page

manual containing literal translations, simple grammar, additional exercises and conversational material for the nominal sum of $2.50. Once this material has been absorbed, there is nothing to prevent the issuance of supplementary sets from time to time.

Mention should also be made of the large collection of pictures, films, slides, and exhibits on Spanish American subjects which are made available to the pupils of our schools through the activity of the Visual Education Department. It would be a mistake to spend so much on one phase of the subject that other and equally important ones are neglected. Eventually, we hope to have a large number of sound films depicting the life and activities of our Pan-American neighbors. With that as a form of vicarious travel and a subject knowledge of Spanish to understand the sound track on the film we will have gone a long way not only to make our people more bi-lingual, but to tie North, Central and South America into a hemisphere with a united culture. This will result in making us impregnable to the attacks of foreign enemies; it will also enrich our lives and increase our enjoyments.

Use of Natural Science Sound Films In Primary Grades

CARL T. COBBS
District Sup't. Little Lake School
Whittier Union High School District, California

A concise and concrete summary of an experimental investigation completely described in a thesis presented to the University of Southern California in partial fulfillment for a Master of Science Degree.

MANY sound films have been made for use in the classroom. These films have been intended to fill a vital need. Many opinions have been given speculating on how well the need was filled. Experimental evidence has been given for some films on the higher grade levels. Experimental evidence is lacking on most sound films which could be used to meet the interest on the primary level. The picture is a language in itself and has been used by man ever since he has attempted to communicate with others. Motion pictures have been used effectively to teach natural science to the intermediate grades. Properly projected films have proved satisfactory to all the primary grades. Both silent and sound pictures have proved beneficial.

The purposes of this experimental investigation was to teach three short natural science units to grades one, two, three and four and compare the differences in total learning made by an experimental group who had the rather technical sound films as supplementary teaching material, and by a control group who had every privilege except the use of the three sound films.

The materials used were a sound projector, three sound films, with one on plant life and two on animal life, a portable four by six foot beaded screen, California Test of Mental Maturity—Short Form for equating intelligence (Pre-Primary, Primary and Elementary), a unit of instruction (including a manual for each film for the experimental group only), and three original tests (one for each unit of study).

Six schools were chosen where grades one, two, three and four were available for the study. There were three control schools and three experimental schools, respectively. The regular teachers of the grades mentioned were accepted. Each group took the same six weeks to complete the units of study. The units of instruction, which included the continuity of the films, were the guides for the teachers and the control schools. The control teachers asked and were granted permission to use other aids. They consented to stay within the time limit and not look at the handbook or the film until after the experiment was completed. Three Erpi educational natural science talking pictures, "The Frog," "Leaves," and "Butterflies," were used, plus a teacher's handbook for each film to supplement the unit of instruction for the teachers of the experimental schools.

The mental maturity tests were given the first week of the experiment. The experimenter devised a true-false test for each of the three units of study. Each unit test contained fifty statements based upon the words of the sound films, wherever possible, and included in part the interest in the picture content. Both the control group and the experimental group were given the same test in the same way the same week. Every teacher of every grade tested read the statements to her class and each child marked his answer to each statement on his own test. The immediate and recall tests were identical. In every case the immediate test was given the third period of each unit study. Thirty minutes a day two days a week for a period of six weeks was taken for the complete study, except for the recall tests. The teachers were permitted to answer questions after each test and to accept any contribution brought in as a natural interest follow-up of the children. Additional teaching of the units was forbidden.

The differences in intelligence between the experimental and control groups of each of the twelve groups selected for comparative purposes are as a whole relatively insignificant. Therefore, intelligence is a controlled factor throughout the present study and variations in the responses of various groups to the different tests cannot be attributed to this factor.

The test pertaining to frogs justified the following conclusions. In comparing experimental with control groups:

(1) The average scores of the experimental groups excel those of the control groups.

(2) The most significant differences in average score between experimental and control groups occurs in the second, third and fourth grades.

(3) In general, the boys of both groups and of all

grades slightly excel the girls in average scores.

(4) In general, the average score of all groups increases according to grade level which fact is noticeable in the experimental group.

(5) The responses of the various groups show little variation when results of the immediate test were compared with those of the recall test.

The test pertaining to leaves justified the following conclusions. In comparing experimental with control groups:

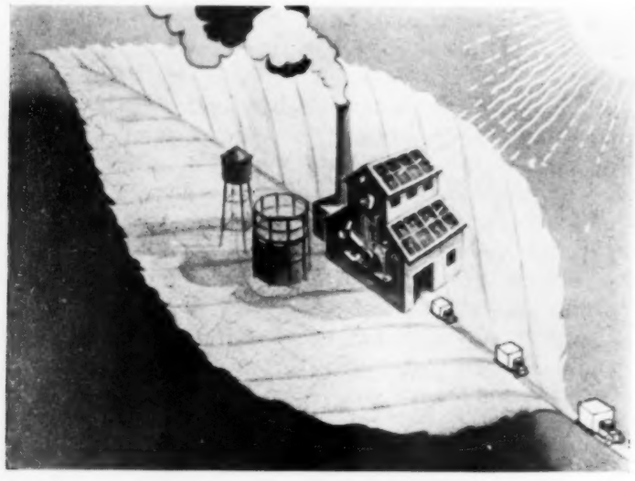
(1) The average scores of the experimental groups with one exception, excel those of the control groups.

(2) The greatest differences in average score between the experimental and control groups occur in grades two, three and four.

(3) In general, the girls in every grade of the experimental group made the higher scores of both groups on the immediate test while the boys of every grade of the experimental group made the higher scores on the recall test.

(4) In general, the scores of the girls and boys of the experimental group excelled the scores of those made by the control group in grades two, three and four.

(5) A significant fact is that there was no appreciable difference between the average scores made on the immediate and recall tests by any grade of either group.



From the Erpi film "Leaves."

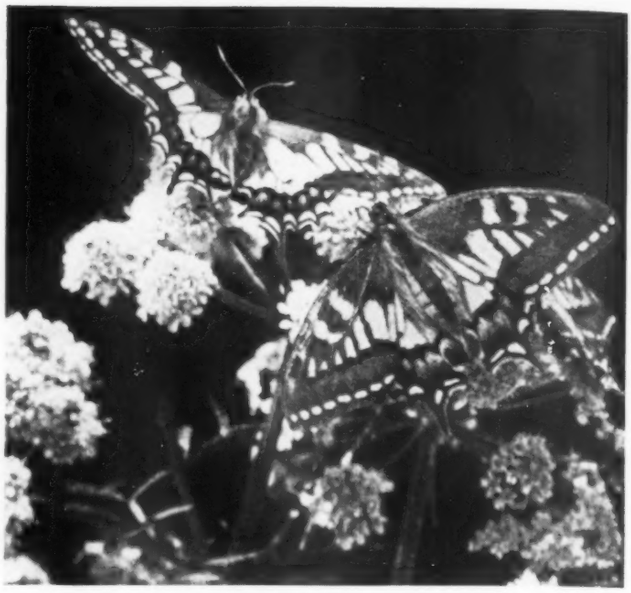
The test pertaining to butterflies justified the following conclusions. The comparison of the experimental group with the control group shows that:

(1) The experimental groups of each particular grade excel the control group in average scores made on both immediate and recall tests.

(2) The differences in average scores of experimental groups as compared with control groups is in each instance statistically significant.

(3) The superiority of the experimental group over the control group is probably attributed to the experimental factor, which in the present instance consists of the sound film pertaining to butterflies.

(4) In general, there exists very little variation on the tests in so far as the sex of the participants was concerned.



From the Erpi film "Butterflies."

(5) Generally, the average scores of all groups increases according to the grade level and the increase is particularly noticeable in the experimental group.

(6) The responses of all groups show little variation when the results of the immediate test are compared with those of the recall test.

The reactions secured from all groups by means of true-false tests dealing with each unit are summarized as follows:

(1) The results of all the tests show that the pupil response was good for the sound film "Leaves," better for the sound film "Butterflies" and best for the sound film "The Frog."

(2) The experimental groups of each grade excel the control groups in average scores made on both immediate and recall tests.

(3) The difference in average scores of all experimental groups as compared with all control groups is in nearly all instances of statistical significance.

(4) Generally, there exists very little variation in average scores in so far as the sex of the participants is concerned.

(5) Generally, the average scores of all groups increases according to the grade level. The increase is particularly noticeable in the experimental groups.

(6) The responses of all groups show little variation when scores on immediate and recall tests are compared.

(7) The intelligence quotients of each comparative group are equivalent.

The data presented in the present investigation seem to justify the following conclusions:

(1) The three sound films were valuable as teaching aids in presenting natural science to primary children.

(2) The three sound films were good educational factors because each established and maintained the interest of the pupils in the presentation of rather highly technical scenes and explanations.

Biological Film Production at Rutgers*

How a University's own photographic laboratory produces its educational pictures for the biological sciences.

EARLE B. PERKINS
Director, Department of Biophotography
Rutgers University, New Brunswick, N. J.

AN INCREASING number of colleges and universities throughout the country are using 16mm films to illustrate course subject matter, following the lead of the secondary schools where there is even more widespread use of motion pictures in classrooms. In the latter, films of a general educational nature were used originally as entertainment at the general school assembly; now we find in addition, motion pictures used to supplement specific course work. Producers and distributors have made available a great many pictures, some good and some bad, and there is no lack of quantity and variety of illustrative material. The chief need at the present time seems to be the maintenance of a high standard of quality in these films.

The institutions of higher education have been slower to adopt the use of motion pictures in the classroom and laboratory because there is a lack of suitable films. Excerpts from theatrical productions have been prepared for educational purposes, but these at best are only a makeshift. Films of a scientific nature have been made by educators and scientists, and although accurate scientifically, they are often of poor photographic quality. The ideal situation would be for the large motion picture producers, with their great resources and highly skilled technicians, to collaborate with scientists and educators in producing films specifically for colleges, universities, and secondary schools. The field is strictly comparable to the publication of textbooks, and as much care and skill is required in producing a suitable film as in writing and publishing a worthwhile book.

The University of Chicago, with the cooperation of Erpi, has pioneered in the production of educational subjects, and other universities have followed with creditable films designed to supplement particular courses. Through these universities, or the commercial distributors, films may be rented or purchased for use with courses in art, history, literature, foreign languages, geography, geology, physics, chemistry, biology, and even mathematics. Many other subjects, too numerous to mention, are represented on celluloid as well as on the printed page.

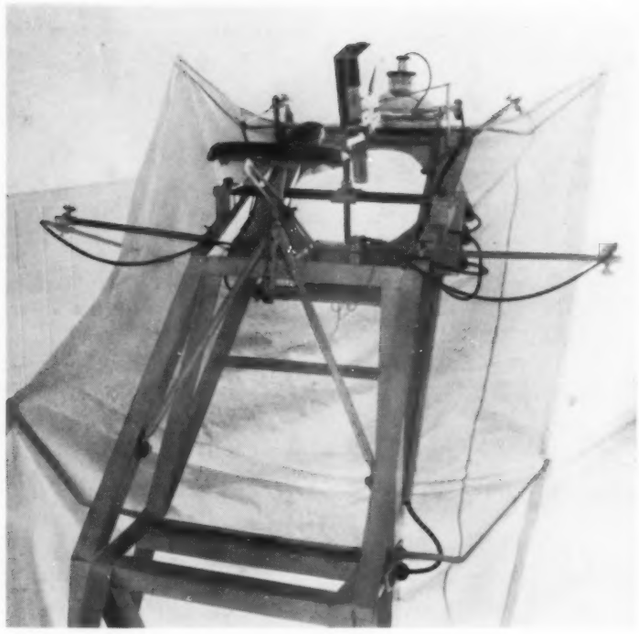
Of all subjects, biology in its broadest sense, lends itself unusually well to pictorial representation. From the time a student begins his elementary course, until he becomes a professional teaching or research biologist, or a practicing physician, or a commercial research staff worker, or a veterinarian or a psychologist, or a museum field naturalist, he is confronted with innumerable diagrams, drawings, sketches, and photographic representations of gross microscopic structure and function. Descriptions of anatomical parts, functional activities, environmental relationship, genetic make-up, the course and treatment of mental and physical disease, are supplemented in textbooks and monographs by many line drawings and half-tone cuts. Yet these fail to impress upon the mind one very important characteristic of living things—action.

Motion pictures, and especially those in color, bring to students interpretation of biological phenomena in a vivid and striking way. Too often preserved specimens lacking their natural color are the only materials to be found in the laboratory, and even with living specimens present, they cannot always be demonstrated conveniently to large groups. Then too we have in the motion picture camera a means of speeding up or slowing down the apparent rate of biological processes so they may be studied effectively. As examples, the growth of plants under experimental conditions may be speeded up by means of time-lapse photography so that the actual growth movements may be studied; embryological developments may be watched on the screen; rapid movements such as the beating of cilia, the contraction of the muscle fibers, the locomotion of protozoans, may be slowed down to the point where an accurate analysis of the process may be made. In this way the motion picture camera serves as a valuable research tool.

Equipment for time-lapse photography.

Realizing the value of this important adjunct to the study of Biology, Rutgers University a little more than two years ago added its new Department

* Address presented at the Second Conference on "The Educational Production of Motion Pictures" at Ohio State University, November 20, 1940.



Left: Operating room dolly for taking surgical pictures. (Front view)

Right: Camera mount and light controls on the surgical dolly. (Rear view)

of Biophotography. This work really began in 1931 when the noted photonaturalist, Norman McClintock, came there with his motion picture equipment, including elaborate time-lapse control mechanisms, to continue his photographic studies of flowers, insects, and wild animal life which he had carried on at the University of Pittsburgh. Following his death early in 1938, the writer organized the new Department and equipped a laboratory for an expanded program.

The purpose of the Biophotography Department is two-fold: (1) to produce instructional motion pictures, chiefly of college grade, in the field of Biology and related sciences, and (2) to use the motion picture camera as a research tool in the analysis of biological problems. The results of this work, in the form of motion picture film, are considered equivalent to the publication of teaching and research material in the scientific journals. Made available to secondary schools, colleges and universities, and to medical and other professional schools, the scope of dissemination can be as widespread as in the publication of printed matter. At present the Department is distributing its own productions under the name of Rutgers Films.

Now ready for distribution are fifteen new Zoological films, most of which are in color. Others are in preparation, as well as a series in Botany with time-lapse films on plant growth completed, a series in Psychology, and a great number of surgical films soon to be announced. The latter are entirely in color and will be available only to medical schools and the medical profession.

The unusual clarity and high magnification of the operative field in these surgical films has been made by a new operating room dolly. This is the invention of Dr. Marshall Smith, New Brunswick surgeon, who is directing the surgical films. The camera and cameraman are supported above the surgeon's head by a duralumin framework which is rigid and portable. It is entirely self contained in regard to lights and accessory camera equipment, and the sterile field is completely protected from contamination. This piece of equipment is indispensable where serious operating room photography is attempted.

Particularly noteworthy on the strictly photographic research side, is the development at Rutgers by Clinton P. Veber, of a remarkable "Time Telescope" which controls the camera in making time-lapse pictures of growth and other slow processes. The exposure is controlled automatically by a photo-electric device, and the time-lapse interval can be set for any desired duration of time. This makes possible the fully automatic, even, exposure of any length of film without manual or mechanical control. This machine is invaluable in the production of plant growth motion picture studies.

The laboratory, known as the McClintock Memorial Laboratory occupies one floor of a large brick building and is well equipped for current production. Inasmuch as all work is now being done in Kodachrome, the facilities for processing film are restricted to short test strips and to the making of titles and animations in monochrome.

No attempt is being made to produce sound films because of the present tendency for the lecturer to add his own commentary to instructional films, in Biology at least. A full resume of each film is being prepared, listing titles and a description of each scene, so the lecturer may use this as a study guide while pre-viewing the film. He may then cut the film to suit his course, or vary his comment from time to time to emphasize certain parts. A sound film does not lend itself to this degree of flexibility.

The fundamental idea back of the work being done at Rutgers is to create a motion picture textbook in these subjects, whereby the visual record will parallel textbook material and can be used to supplement the methods of teaching now in vogue. A series of coordinated films in one particular subject, with suitable comment by the lecturer, is much more effective than many disconnected subjects.

MOTION PICTURES—NOT FOR THEATRES

Installment Twenty-four—Masters of the extraordinary powers of the camera and their notable public contributions to nature study and biology.

By **ARTHUR EDWIN KROWS**

DR. RAYMOND LEE DITMARS was distinctly a specialist producer who had made hundreds of subjects important to natural science courses in the schools and whose authoritativeness in his own line was scarcely to be challenged. As a scientist, he ranked first as a curator of reptiles; but had he confined himself to reptiles in his film work, he would not have rendered more than a small fraction of the important service which he has given to the non-theatrical field these many years. It was estimated, in December, 1935, that, during just the preceding twelve months, approximately 90,000 school children had viewed the films he had made, distributed by the New York Zoölogical Park.

He joined the staff at the Park in 1898; and I find particular interest in his story of how it came about, because, in that period, I was playing "cops and robbers" with other lads of my own age, in the 524 acres which the founding Society was preparing to fence in. I remember very well, indeed, the temporary cabin which was the first headquarters in the field, with the bear cub chained to a tree in front of it. I believe there were also a young wolf and a snapping turtle. At that time Ditmars, about twenty-two years of age, was a reporter on the New York *Times*. The city editor, recalling that the young man was interested in animals—he had had several years' experience as an assistant curator of entomology at the American Museum of Natural History—sent him up to the cabin in the Bronx one Sunday afternoon to see what was going on there. But, in the course of the Ditmars interview with Director Hornaday, Ditmars revealed his personal interest and was promptly engaged to assist in making the Park one of the most notable of its kind in the world.

In 1913 he erected a small studio at the rear of his home at Scarsdale, New York, for the production of animal movies. The films were used first in his lectures. But in 1916 they became especially well known to theatregoers as a series entitled "The Living Book of Nature." In successive numbers, under that name, they ran for more than three months at the Strand Theatre on Broadway, and then were distributed to the rest of the country through Educational exchanges. Earle Hammons, head of the releasing concern, observed at the time that the posters prepared for this series, were the first ever to be especially designed for an educational subject—that is, which were not mere photographic enlargements. I feel that this claim might be disputed; but I am not prepared to enter contrary evidence.

In 1921 Ditmars began releasing a longer series through Pathé the same year in which he achieved additional fame for supervising the assembly of Urban's "The Four Seasons." And, in the concluding month of 1922, he aroused a storm of controversy recalling the torrent of invective and praise which had broken over Darwin, Haeckel and others of that once radical group, by exhibiting a film on "evolution" at All Angels Presbyterian Episcopal Church in New York City.

William Lovell Finley, and his wife, Irene Finley, were known on the lecture circuits for their superior wild life films, especially of birds, before Universal ac-

Dr. Raymond Lee Ditmars, of the New York Zoological Society. It is more than quarter of a century since he began his notable photographic work of making natural history popular.

quired a fine selection of their output for theatrical release in January, 1918. Since that time the Finley pictures have served extensively in schools. Finley was born at Santa Clara, California, in 1876, the same year in which Ditmars saw the light at Newark, New Jersey. In his early twenties he appeared in New York as a budding magazine writer and, at the age of about thirty, became a lecturer for the National Association of Audubon Societies. It was then, also, that he became the husband of the other nature lover of the team, a girl from his home State. In 1911 he was appointed game warden of Oregon, and that led him to a five-year term as State biologist. It was in the Oregon connection that the Finleys began the motion picture work which has resulted so happily in some of the most delightful woodland studies available in this country. They first reached the theatres importantly, I believe, as short items in Bray's "Pictographs." Much of Finley's work has been done in company with his son-in-law, Arthur Newton Pack, editor of *Nature Magazine*.

Motion pictures of wild life in general were made by many transient photographers—sometimes Hollywood cameramen on vacation, unable to resist pleasant opportunities for "shots." One such was William E. Hudson, newsreel man. But films produced in such circumstances have necessarily been more remarkable for their camera work than for their amount of important information about their subjects. Naturally, material of that sort, may be appraised better by closer students in those particular lines. The specialists, therefore, have remained unshaken in their position and not too many in number.

The reference to "Hollywood cameramen" implies, of course, those connected with the professional, amusement studios. As a matter of fact there are scientific photographers who maintain headquarters in Southern California mainly to avail themselves of the same better facilities enjoyed by their theatrical brethren. The Clifton-Allen Wild Life Pictures emanate from that area, and the Allen brothers who produce them, William H. and George E., have done other useful scientific work in recording on film evidences of the life and antiquity of the west coast of the continent from Alaska to Central America. They are native Californians, long known as lecturers on animal life and primitive people.

An interesting story in this department of picture-making, is that of Norman McClintock, of New Brunswick, New Jersey. His father was Oliver McClintock, a well to-do carpet and rug merchant of Pittsburgh, who trained and employed him in his own line. In his early manhood young Norman had been caught by the fascination of amateur still photography, and he dabbled in it with the amateur's usual limited equipment. In 1908, however, when he was about forty, he narrowed to the especial work of photographing wild animals in motion. He was so absorbed in it by 1914 that he resigned from his father's business to give it his full attention. His chief difficulty, he found, was coming close enough to his timid subjects, so he concentrated his efforts still further by employing telephoto lenses with which he could photograph them from a reasonable distance. He did not originate the method, but there were many problems still to be overcome in it, and to McClintock are now attributed various improvements in the technique.

In 1917 he took up big game photography on the same principle, producing a number of interesting films which he

used to illustrate popular lectures given by himself. About 1925 he joined the University of Pittsburgh faculty, with the title photo-naturalist, a helpful and convenient term apparently of his own devising. In 1931 he found a similarly described post at Rutgers College.

It seems inevitable that the man of scientific bent who takes up motion picture photography and, instead of depending on a professional cameraman for his results, is obliged for his own success personally to study the technical details concerning lenses, photographic emulsions, laboratory processes, actinic values and so forth, will branch out, sooner or later, into time-lapse subjects and microphotography. McClintock conformed with the rule, and presently became a specialist in that study of the adaptation of plant life to its environment which is called ecology. His larger results were shown in numerous time-lapse studies of the vegetable kingdom. Industrially he was known also as "photo-biologist" to Koppers Research Corporation. It was following his death in 1938 that Dr. Earle B. Perkins organized the Department of Biophotography at Rutgers.

No American has had greater success with the time-lapse method than Arthur C. Pillsbury, of Berkeley, California, a widely known, popular lecturer in his especial line of botany. He was born at Medford, Massachusetts, of parents who both were physicians. Taken to California in 1883, he presently entered Leland Stanford University where he became a classmate of Herbert Hoover, majoring in engineering in 1894. His invention of a panoramic still camera, with a swinging lens, brought his appointment as official Government photographer for the United States Census Bureau in Alaska during the gold rush of 1898-1899. As a newspaper photographer in San Francisco in 1906, he photographed the ruins, caused by the earthquake and fire, from a balloon. From then until 1907 he held the photographic concession in Yosemite National Park, where he maintained a studio. In 1912 he began his series of motion pictures of the wild flowers of the Sierras, and soon afterward undertook applications of the time-lapse method, his engineering training, of course, being of vast assistance in devising proper equipment. His first motion picture to attract general attention was "A Springtime Miracle," showing the wild flowers of the Yosemite coming magically into blossom. I believe that this was released to the theatres originally by Bray.

His next major effort, after thus accomplishing the compression of time, was to shorten distance. He wished to show the fertilization processes previously visible to the eye only through the microscope. Once more he essayed the task of building efficient photographic apparatus, spending two years in incidental experiments at the botanical department of the University of California, where Dr. Harper Goodspeed placed complete facilities at his disposal. Success rewarded his efforts, and he then branched out into film studies of all microscopic life. He it

Lewis E. Tolhurst (left) confers with scenarist William Wing on production of "The Microscope Mystery."

was who made the remarkable life story of the fly for Eastman Teaching Films.

Today, on his letterhead, one reads that Arthur C. Pillsbury, who lectures on "Camera Explorations in Plant and Animal Life" and is president of Pillsbury Pictures, Inc., at Berkeley, California, also produces "Microscopic, X-Ray and Lapse Time Pictures." Louis Pasteur made the same progress from the vegetable into the animal kingdoms, from studies of the fermentation of beer and wine to those of silkworms, chickens and sheep. Only, Pillsbury preferred to remain most of the time on the vegetable side, even if "Pillsbury's Flowers" occasioned too many puns involving "Pillsbury's Flour," product of the celebrated millers at Minneapolis.

Pillsbury's next greatest technical problem was to find a satisfactory color process. His chief interest always being botany, it was only natural that he should be discontented to render his flowers exclusively in black and white. He had tried most of the processes, he told me one afternoon in 1932 when he called to ask if I knew of a better one, and at that time was obtaining his most satisfactory results with the old Pathé hand-cut stencils. That particular work was done with two machines purchased from the New York office of Pathé, which had imported them from Paris but had no apparent use for them then. A little later I learned that the Technicolor people were assisting Pillsbury in prolonged tests with their cameras at Berkeley; but in 1937, in his book, *Picturing Miracles of Plant and Animal Life*, he stated that he had found Eastman Kodachrome the best of all.

Biological Experts

After having had a casual reviewer's experience in seeing early F. Percy Smith and Dr. Comandon experiments in microphotography, I was interested, in the autumn of 1916, to hear of some pioneer work in the same direction, accomplished by an American. It was reported by Carlyle Ellis, from the Triangle Studios in Los Angeles to the publicity department in New York, where I was situated then. Ellis's close friend, Paul Powell, one of the Triangle directors, had just been assigned to produce a story entitled "The Microscope Mystery," and it was for this film, starring Wilfred Lucas and featuring Constance Talmadge, that some extraordinary "microbe actors" were to be employed.

The story for the photoplay was written by William E. Wing, one of the veteran scenarists on the D. W. Griffith "lot," to exploit a contrivance built by Lewis E. Tolhurst, of Los Angeles, a young microscope enthusiast. With Tolhurst's device, it was alleged, one could magnify and photograph many minute living specimens not previously susceptible to such handling. Wing was so certain of the great future for the secret machine that he had gone into partnership with Tolhurst to develop it. The promise, however, was more thrilling than the performance. I regret to say that the latter was rather flat. The "cut-in" examples registered the possibilities of magnification, but showed little or no action in a very narrow field, which is to say that the audiences saw only the sort of thing which had been known to them for a long time in their magazines and newspapers.

In reality, though, young Tolhurst had hit upon something important— a relatively cold light. One of the serious problems in microphotography had always been to illuminate the subject sufficiently to photograph it without at the same time burning it up with the concentrated heat. His apparatus was indeed to have a future usefulness, although not as much in the way of fictional material as Wing had imagined, for Tolhurst proceeded on his own thenceforward as a popular scientist, and became perhaps the most formidable competitor of F. Percy Smith in that line.

If heat of illumination handicapped the biologists, what must have been the predicament of Wilson A. Bentley, the New England "snowflake man," who made photographs of dew condensation and frost formations through the microscope? Bray's "Pictographs" used short lengths of film on his studies, produced in Bentley's own dooryard at Jericho, Vermont. But then again, the problem of high temperatures could not have been of much trouble when using daylight outdoors while the mercury hovered just above zero.

At the Triangle time Tolhurst was about twenty-eight years of age. He had studied law, I understand, and had been admitted to the California bar. What had started him in this new curious direction had been, it seems, an item he had read somewhere about the optical firm of Bausch & Lomb bringing out a projection microscope. Now, encouraged by the mere fact of the Triangle picture, he put Blackstone aside and gave all his spare time to producing scientific films, earning his living meanwhile, by working in a repair shop. About 1924 he won the interest of Sol Lesser, president of Principal Pictures Corporation, who contracted with him for twelve subjects and arranged for their release through Educational under the general title, "Secrets

of Life." I have little doubt that the intent of the showmen who took Tolhurst up was to ride on the popularity of the F. Percy Smith material by imitating its more sensational points. A convenient bit of likely evidence was that Tolhurst's "The Fly" concluded with the star performer on its back balancing a ball on its feet, a circus turn which was one of the most admired items of the old Urban releases produced by Kineto's "educational and scientific staff."

The Bausch & Lomb projection microscope appeared about 1915, and, as that apparently dates Tolhurst, it seems that another pioneer must have started his own career some two years earlier. George E. Stone, of Monterey, was then a student at the University of California, but he already had made up his mind to devote his life to educational cinematography. According to his own story, he began by studying the existing situation, and concluding that the dividing line between theatrical needs and those of the school was so sharply drawn that, in order to serve the latter properly, all "box office appeal" must be ignored.

To test the accuracy of this hypothesis he planned a motion picture on the subject of sex education. He made the first scenes in 1914, but put them aside while he went on a film-making expedition to Central America. Further interruptions were occasioned by depleted funds and college requirements for a degree. But in 1916 he was joined by a volunteer assistant, Professor J. A. Long, and together they completed the four-reel subject. It was entitled "How Life Begins." Prints were sold widely to educational and social service institutions, and the Y. M. C. A. adopted it for regular showings in the army camps in both America and France. Its distribution stimulated by the war machine, it went around the world. And about 1920, in peacetime, Mrs. Catherine Carter obtained the contract for its further circulation.

The praise won by that single production, which was made, largely with makeshift equipment, for an actual cash outlay of only $2,000—not counting personal services and overhead—brought Stone reputation as well as encouragement. It returned his money investment, and added profits and a certain renown while he went off to war as a member of the Photographic Section of the Signal Corps—witnessing the Battle of the Argonne and participating in the Allied occupation of the Rhine. Returning home, the first years of peace found him producing another four-reeler entitled "The Living World," two single-reelers called respectively, "The Flame of Life" and "Food," and a double, "Malaria and the Mosquito." The last-named was taken over by the Rockefeller Foundation, the same group which was doing such useful work with the George Skinner production, "Unhooking the Hookworm," but the other subjects were curtailed in their earnings when Stone's distributing agent suspended full operation during a readjustment depression in 1920.

All who film the living mechanisms feel with especial force the need of color for adequate representation, and Stone's inquiries as to how he might obtain it, brought him the post of manager of the Western Branch of the Prizma Company. By the Prizma process he produced eleven one-reelers for theatres, the most notable being "A Day With John Burroughs," the story of the Rookwood Potteries entitled "Magic Clay," and "Trout." The Prizma officials, meanwhile, were working intensively to persuade Hollywood producers to use their process, and, as is usual in the introduction of new film methods of that sort, arranged for inclusion of short color sequences in the feature photoplays. For upwards of a year Stone was in the film capital, therefore, supervising the making of such interpolations. But, late in 1923, he returned to his attractive, compact little studio at Carmel-by-the-Sea to resume his intelligent, constructive work in the cause of visual education.

In the latter part of 1920 those who were interested in the fair progress of

George E. Stone's studio-laboratory at Monterey, California, 1925. Certain that no man can serve two masters, he held that school film production must ignore the box office.

"cinema-biology" witnessed the rise of another specialist in the person of Charles F. Herm, of the American Museum of Natural History. Herm, writing at that time in the *Bulletin of the Affiliated Committees of Better Films,* proclaimed the great need of biological motion pictures. The field was much neglected, he said, and went on to specify the advantages which such reels have over regular animal demonstrations in the classroom. At the start of the second year of Harley Clarke's S.V.E., January, 1921, Herm appeared in *Visual Education* as author of an illustrated article headed "Motion Pictures in Teaching Biology," and in the autumn of 1923 his friends and neighbors, who had wondered why he had left the Museum, were invited to his home in the New York suburb Pelham (not far from the Ditmars studio), to see an exhibition of microscopic films which he himself had produced there.

A year later he had closed his Pelham studio and removed with his equipment to Rio Vista, a suburb of Daytona, Florida. He announced that he had organized the Florida Institute for Cinema Biology, had acquired a plot of ground to be used for botanical experiments and "animal husbandry," and would shortly have a marine biological laboratory in addition. The prospectus, incidentally, made a strong bid for coöperation and support of all public-spirited Floridians. In 1930 he was releasing about seventy-five subjects of four hundred to five hundred feet each, but had begun a new concern, still at Daytona, called Herm's Bio-Cinema Sound Products, Inc. At that time about ten of the films had been "scored" with accompanying lectures.

In 1916 the San Diego Chamber of Commerce was approached by F. R. Edwards with a plan to erect in that neighborhood a studio for the extensive production of scientific films. Preëminently, the output would consist of pictures of surgical operations and botanical life, but, just in case opportunity for expansion might arise, there would also be historical and geographical subjects for colleges and universities. For so ambitious an undertaking the stipulated sum of $75,000 was surely not excessive. However, nothing sensational seems to have resulted. In 1920, schoolmen who were watching the swelling visual education movement, had their attention attracted also to the Scientific Film Corporation, situated on Dutch Street, in New York City, but, in this case, there was something more tangible than a plan. It was a three reel subject called "Microscopical View of Blood Circulation."

About 1923 the Rockefeller Institute of Medical Research in New York set up its own elaborate apparatus for photography of this nature. It was designed by Heinz Rosenberger, a specialist in microscopy who then was made director of its operation. He was also given permission to use it, within certain reasonable limitations, for outside work, which he promoted under the name Rolab. Consequently, Rosenberger's expert services and exceptional equipment have been requisitioned frequently by commercial producers needing short lengths of such material. With this apparatus have been produced many important films, including demonstrations of work by Dr. Alexis Carrel with living cells, and of the late Dr. Hideyo Noguchi on Leishmanias and Trypanosomas.

For the present, however, this is going too far into the departments of higher, professional education. It is the author's intent to discuss that phase in a later place, reserving to the present subject of school films those activities which have been mainly for grades below the college level.

Stirrings Abroad

OVERSEAS nations had been too hard hit by the World War and by circumstances growing out of the World War to make great immediate progress in visual education. There was plenty of favorable disposition, no doubt, but insufficient funds to provide the proper equipment and to organize necessary audiences. Before the War the European school experiments apparently had been as tentative as they had been in America, using borrowed theatrical films for the greater part, the old Urban catalogue—almost identical with that of George Kleine,

which, indeed, had been modeled upon it —representing the then current idea of motion pictures in the schools. About 1914-1915, some particular interest had been aroused by a pedagogical films survey conducted at Geneva, Lausanne and Neuchatel, but the accumulating storm clouds quickly disposed of all that.

Russia, the first nation to retire from the World War, I believe, seems also to have been first of the nations abroad to show a marked revival of interest in educational possibilities of the cinema. Films had been reported in the schools of Muscovy as early as 1916, a full year before the abdication of the Czar and two years after his regiments had gone to the front against Germany. In 1918, the year in which the unhappy Nicholas II and his family were assassinated, and a year after Kerensky's provisional government had taken command, a call for America's educational films came from Siberia. The request was signed by the "Culture Educational Union of Altar District," and it specified a need of portable projectors and U. S. motion pictures "for outside-of-school education."

This was the first important step of the Russian authorities to use one of the greatest known disseminators of information to teach civilized opportunities to a suddenly released peasantry which could not yet read, and the standards of living of which, from an American point of view, were incredibly low. Precisely how America, then extremely friendly to a nation which also had won its independence through revolution, responded to the appeal I do not know, but, in all likelihood, some of the reels which went to far-off Siberia were shipped from the Y.M.C.A. in New York City by Walter Yorke.

In 1926 the Russian Government requisitioning from Leningrad, ordered from Germany 2,000 projectors to be used exclusively in native educational institutions. At about the same time, in Moscow, the Association for Scientific Cinematography opened a combined studio and laboratory to train producers of technical films. Remember, however, that, in a very considerable sense, even the theatrical pictures in Russia during its reconstruction, have been "educational" in purpose, making the situation there unique, and its lessons not always applicable to very different conditions in the United States of America.

While the Peace Conference was meeting at Paris and Versailles in 1919, the new Germany was producing and using so-called educational films. In October, 1920, word came that an especial and strict department of censorship had been established there to control them. In 1923 even the diminished and debt-ridden Austria had appropriated a fraction of its meager income for a supply of school films. The extended production of educational films in Germany was to be noticed particularly about 1926, when many were produced by the *kultur-film* departments of regular amusement-purveying studios, the Berlin organization called UFA (Universum Film, Aktiengesellschaft) represented oftenest in the output.

Conservative England probably could not be expected to move on sheer impulse in welcoming a teaching innovation such as this, although one might have hoped for a slight impress caused by Urban's long pounding at the gates. It was at least encouraging, about 1923, when a British Cinema Commission of Inquiry, established by the National Council of Public Morals, appointed an Educational Committee, and sent its chairman, Dr. C. W. Kimmins, to the United States to study the phenomenon at its most conspicuous source.

Whatever his ultimate report may have been, another committee, that on the Use of the Cinematograph in Education, issued a generally favorable opinion at the Imperial Educational Conference in London in 1924. It was stated on that occasion that a strong *prima facie* case had been established for the real value of films as supplementary teaching aids, and that their best potentialities that way probably would be in helping to impart nature study, geography, science and industrial processes. The reservations were entirely fair and in strict accord with the facts. They were: that production of historical films was still too costly to permit a practicable study of their possibilities; that no satisfactory evidence had yet been offered to prove advantages of motion pictures in literary courses, that the cinematograph should not be too frequently used to show simple processes which the teacher might demonstrate directly, that the film should be adapted to the curriculum rather than *vice versa*, and that the educational film proper had yet to be evolved through the collaboration of film technicians and teaching experts.

Of the reports of the Cinema Committee of Inquiry, none was more interesting than that which appeared in 1925 as a book entitled *The Cinema in Education*, under the authorship of Sir James Marchant. This concerned in large part, the psychological value of the film in class, and described ingenious, revealing experiments in which the teacher was first made acquainted with the picture, then deprived of it and expected to make a creditable showing without it. These experiments and findings stimulated further research, with Dr. Kimmins prominently active. An even happier endorsement of teaching films was made in 1926 at Oxford by the Education Section of the British Association. But a serious setback occurred—serious mainly because of the publicity it was given—when, also in 1926, the London County Council ruled *against* school films, explaining that this regrettable conclusion had been reached after studying the report of a recent survey conducted in the New York City schools.

It was commonly said of the France of the nineteen twenties that the War had bled her white, but plenty of her famed Gallic resiliency remained. Her film industry once, and not so long before, had dominated the world market. At the same time her savants had speculated with great penetration on the possibilities of the cinematograph in education. I have seen it stated that the first French extra-parliamentary commission assigned to study ways and means of applying the cinema to education, functioned as early as March, 1896. Recollections of both these significant facts remained with the French people, and opportunities to restore the happier situation were recognized. In the summer of 1920 one heard that the French Ministry of Agriculture had plans afoot to teach farming with films. A bit later one heard of a Paris article of importance entitled "The Educational Film" in *School & Life* ("Le Cinéma Scholaire" in *L'Ecole et la Vie*), edited by L. Crebillon; and he wrote therein concerning a library of 600 reels at the Pedagogical Museum, available to schools on a modest rental basis. What were these reels? On geography, monsieur, 275; about natural history, 175; appertaining to hygiene, 33; industrial, 41; physics, 12; sports, 21, and—here I knit my brows in perplexity as I round out the list (somewhat short of 600 but still imposing enough), with 26 "on hunting."

The French interest, possibly stimulated by English activity across the Channel, was to reach a sensational peak in November, 1927, when it burst into elaborate discussion in the French Senate. There the entire matter of what motion pictures might and might not accomplish in the classroom was debated once more, and, when the evidence was all in, a resolution was passed requiring the delighted Minister of Education—Edouard Herriot, no less—to prepare a bill permitting reasonable use of films in all branches of public instruction. M. Herriot had long championed the cause of school films. Only the year before he had established a commission to study the matter, with headquarters in the Pedagogical Museum at Paris, and the findings of that body had greatly fostered the new movement. French schools were, of course, already using films. In the City of Lyons, the collection of material for that purpose was said to have embraced approximately 1,400 different subjects—rather encyclopaedic, one might say. Another 1926 event in France was the foundation at Paris of the Societe des Films Scientifiques et Documentaires, to produce educational pictures exclusively.

Mussolini's Black Shirt march to Rome, October 22, 1922, was not at once conducive to the development of educational film projects in Italy, but, about two years later, native pictures of this type began to appear increasingly, and presently Mussolini's state educational films division, called La Luce, was at work, endeavoring to produce in a short time an extensive library of pedagogical and industrial material. This was to lead in part to the educational film section of the League of Nations. La Luce National Institute was originally a private enterprise called the Sindacato Istruzione Cinematografica. November 5, 1925, as L.U.C.E. — L'Unione Cinematografica Educativa—it was recognized, approved, and its services adopted by the Government.

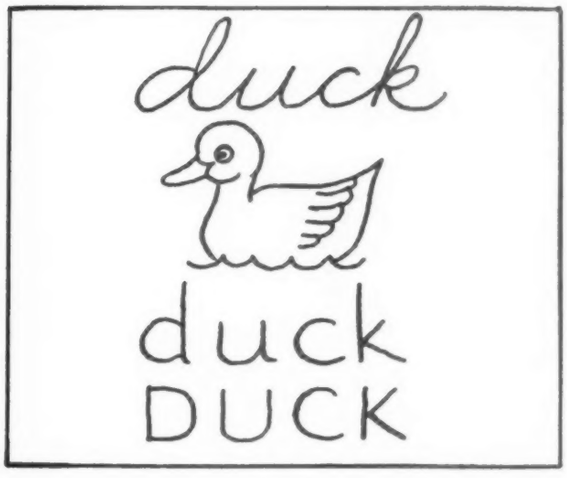
(To be continued)

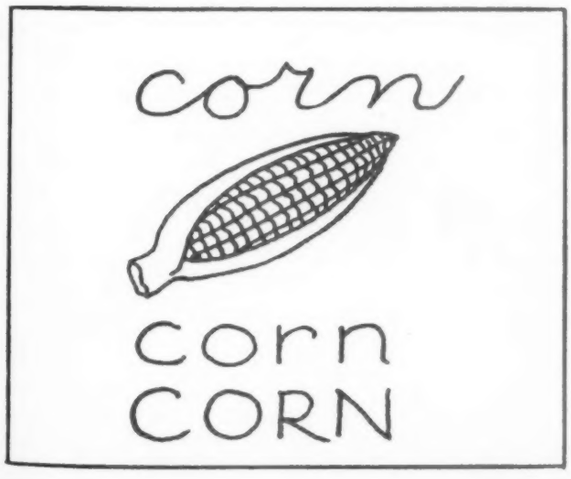
Teaching Spelling – With Hand-Made Lantern Slides

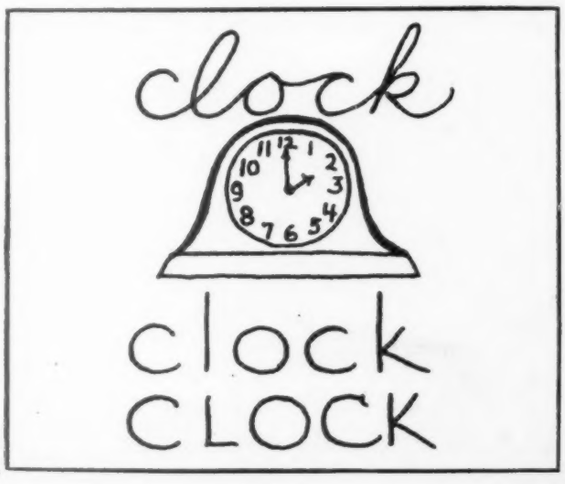
By ANN GALE Lindblom High School, Chicago

SPELLING exercises are much easier with hand-made lantern slides. The word may be presented to the whole group at the same moment, and also may be withdrawn and replaced thus insuring equal experience with the word. One successful method is 1) to show the word written or printed or both while the children say the word and then say each letter in the word. 2) The slide is withdrawn while the children say each letter from memory. 3) The slide is replaced while they copy the word. 4) The slide is withdrawn while the children write the word from memory.

The six words presented below are for third grade. They were chosen because they are troublesome words and because it is possible to present them with pictures. With many words pictures are impossible and just the writing or printing is used.







The simplest type of hand-made slide is made by drawing or tracing on finely finished etched glass with ordinary medium lead pencil. Color, by special crayons or inks, enhances the slides greatly. Fine effects are obtained by blending with crayons. About one-third inch margin should be left all around the slide. The slide is readily cleaned with soap or washing powder to receive a new picture.

The Literature in Visual Instruction

A Monthly Digest

Conducted by ETTA SCHNEIDER

UTILIZATION

Curriculum Implications of Motion Pictures—Charles F. Hoban, Jr.—*Curriculum Journal*, 11:365 Dec., 1940 (See ■1)

Use of Films in the First Grade—Margaret Wheeler, Fife Schools, Wash.—*Washington Education Journal*, 20:85 Jan., 1941 (See ■2)

Classroom Use of Films (Motion Picture Department)—Roy Wenger—*The Social Studies*, 32:31 Jan., 1941 (See ■3)

How Teachers Use Movies—Hardy R. Finch and Eleanor D. Child, High School, Greenwich Conn. *Movie Makers*, 15:529ff Nov., 1940

Outlines many of the problems of film use in schools, presents ten questions for the evaluation of educational films, and gives six specific suggestions for efficient instruction with films.

ADMINISTRATION

The Cooperative Film Library Movement—H. A. Gray, Erpi Classroom Films — *School Management*, 10:131 Jan., 1941 (See ■4)

Celluloid Servants — Ralph R. White, Principal High School, Weld, Maine—*Maine Teacher's Digest*, Vol. 1:14 Oct., 1940; p. 56 Dec., 1940 (See ■5)

The Visual Aid Experiment in Southwest Virginia—I. R. Silverman, Director of Visual Education, State Teachers College, Radford, Va.—*Virginia Journal of Education*, 34:105 Dec., 1940 (See ■6)

Making Way for Audio-Visual Education—William H. Bowen, Jr., Supervisor, Audio-Visual Education, Virginia State Dept. of Education—*Virginia Journal of Education*, 34:100 Dec., 1940 (See ■7)

Enriching the Curriculum through Visual Aids—John Alex Rorer, U. of Va.—*Virginia Journal of Education*, 34:101 Dec., 1940

A summary of the principles and purposes of visual aids. Bibliography and some sources listed.

EVALUATION

Teaching Conservation of Natural Resources through Motion Pictures—Effie G. Bathurst, N. Y. State Education Department—*Secondary Education*, 9:270-7. Dec. 1940. (See ■8)

Visual Aids Handbook — Bureau of Visual Teaching, State College of Washington, Pullman. 1940. mimeo. 50c plus postage. 25c unbound. (See ■9)

MUSEUMS

Enid's Museum Is Pride of High School Students—J. Orville Bumpus, Stillwater, Okla.—*Journal of Arkansas Education*, 14:4 Jan., 1941 (Reprinted from *Oklahoma Teacher*) (See ■10)

Use of a Museum in Hygiene Classes—L. Joseph Cahn, Townsend Harris High School, N. Y. C.—*Journal of Health and Physical Education*, 12:6 Jan., 1941

The American Museum of Natural History serves as a valuable aid in the teaching of hygiene. However, the instructor and the museum curator realized that visits to the museum were most effective only if they were carefully planned and executed. The article describes in detail how guide-questionnaires help.

EXHIBITS

The Technique of Exhibits—Elizabeth Eiselen, University of Chicago—*Journal of Geography*, 39:320 Nov., 1940

A much-needed account of important considerations in planning an exhibit, be it a small classroom display or a permanent museum exhibit. Advice is given about the selection of site, the audience, the technique of presenting the content and planning for labels.

SCHOOL MADE VISUAL AIDS

Producing a School Movie—Lester Bruton Sands, DePauw University, Greencastle, Ind.—*School Executive*, 60:28 Jan., 1941 (See also "Presenting Fundamentals in Colored Moving Pictures," *Education*, 61:264-7 Jan., 1941) (See ■11)

Pupil-Made Lantern Slides — Claire Mulville, Greenwich, Conn.—*Connecticut Teacher*, 7:22 Jan., 1941 (See ■12)

Class Makes Movie of "Julius Caesar" —Desse B. Cox, Hot Springs, Jr. High, Ark.—*Journal of Arkansas Education*, 14:no. 8:8 Dec., 1940

The project to produce a film of Shakespeare's Julius Caesar was pupil-planned and pupil-executed. The filming was done by a student who owned a camera and supplied the film. Future classes in English will use this film as a visual aid in the teaching of drama.

Making Lantern Slides—Jack Wright—*Camera Craft*, 47:493-7 Oct., 557-61 Nov., 613-19 Dec., 1940 (See ■13)

PHOTOPLAY APPRECIATION

"Fantasia" and the Children—May Hill Arbuthnot — *Childhood Education*, 17:200 Jan., 1941 (See ■14)

History in Commercial Motion Pictures —Rosebud Teschner Solis-Cohen—*The Social Studies*, 32:32 Jan., 1941 (See ■15)

"Several Students Had Seen the Picture"—Eleanor W. Mossman, Lane Technical High School. *Chicago Schools Journal*, 22:56 Nov.-Dec., 1940 (See ■16)

PARAGRAPH COMMENTS

■1 Curriculum Implications

This year schools are spending over a quarter million dollars on 16mm. films for classroom use and another two and a quarter million dollars for projection equipment. There is great potential value in this expenditure. The schools have been slow in accepting films as educational aids, and even where they are being used they are not always used widely and well. Some Prevalent Errors are:

1) The motion picture is regarded as a supplement instead of as a complement to other educational materials and procedures. Used supplementarily, motion pictures are intended to supply more of the same kind of experience (usually provided through lectures or reading assignments). Used complementarily, they are intended to supply a different kind of experience necessary to complete a whole. The one use is primarily illustrative, the other developmental. The one further illustrates a principle already developed, the other serves as a basis for the development of a principle.

2) Motion pictures are a basis for conceptual development, and not exclusively an interest-getting device. It may lead to new activity or it may clarify and organize experiences.

3) Films should be used in making inferences about a variety of life situations; and not only for what the film itself contains. For example, a film about the circulation of the heart can be used to show exactly the process involved, or it may be used as an illustration of the way in which the bodily organs are interdependent and are affected in their functioning by daily bodily activities, such as exercise. Further study is needed to show other organs of the body that are interdependent.

Curriculum leaders should study the essential nature of motion pictures in the curriculum; and teachers must be taught to discriminate these functions in order that the potential values of the motion picture might be gained.

■2 Films in First Grade

Motion pictures were used in the first grade with the result that it was possible

to introduce social-science experiences that are otherwise postponed until third or fourth grades.

Some of the films used were aimed to give the children an appreciation of the interdependence of people in our complex society, and others showed animal life. Included in the first group was "Co-operative Wool from Fleece to Fabric" which shows wool from shearing to clothing. The children gained an appreciation of the number of people concerned; some knowledge of the map of the United States; and an appreciation of transportation involved. Another film, "Rolling down to Mexico" depicts an automobile trip through Mexico. The children learned something of American engineering, about mountains, and the film stimulated a further interest in Mexico. It was followed by a film, "Native Arts of Old Mexico." In addition to the handicrafts described, the picture helped the children to understand the difference between a culture in which all of the processes of production are carried on with simple tools by a few people and the industrialized methods seen in the wool picture. The children became interested in working with clay and gained an appreciation of design. A film on Shelter was a good follow-up because the children had been invited shortly before the showing to see a program given by the third-graders on housing from primitive times to the present.

The pictures were used in various ways, depending upon the teacher's purpose. Discussion was always held either before or after or both.

Here is a description of the use made of the wool picture. The children had read about the story of wool in a picture book, "Pelle's New Suit," by Elsa Besow. The children talked over the processes a day or two before the film arrived. After the showing, the discussion showed that some of the children had been confused by the complicated machines. It was decided to see the picture again in the afternoon. The children had little difficulty in following the steps and they took in a remarkable amount of detail, but the factory was too complicated. The second showing apparently cleared up many points. The class dictated the story of wool to the teacher. There were about nine or ten sentences in the finished story. The children then cooperated in making an illustrated class book on the story of wool.

Without the film the children might have learned about the steps in preparing wool for fabric but they could never have understood that it was a large industry. They would never have understood how many people are involved, nor how complicated are the machines. The film helped to enrich their experiences, sharpened their observation, stimulated thinking and helped the children to understand the need to reserve judgment.

This is one of the best articles on motion pictures for primary grades to appear in many months.

■ 3 Classroom Use of Films

A critical examination of the content of social studies films as aids to promoting intelligent discussion. The "factual" films in the social studies deliberately avoid the conflicts in the field and give the impression that they are presenting confirmed and accepted truth. Discussion that would bring out points of conflict is difficult to pursue after the showing of such films. If it is follow-up discussion that is desired, we can get it by setting up a conflict in human association in the film so that it demands a solution. The film may hint at a solution or several solutions, but it must not try to solve the whole thing by picturing an air-tight answer. Set up the problem in the film. Discussion will then follow naturally.

Topics that lend themselves to such treatment in film are suggested. The films distributed by the Human Relations Commission are all focused on conflicts in human relations. The films made by the Traffic Safety Project at Ohio State University used the technique recommended by the author. Teachers engaged in film making are urged to try presenting problems of their own community through films. Problem films can help to start the democratic processes working in the classroom, in the community forum and in the nation.

■ 4 Cooperative Film Library

A report based on the services of 20 representative film libraries. The agency most closely concerned with film distribution, according to the study, is the teachers' college. The libraries in all cases were organized to meet a definite problem within the state or region. The personnel in these libraries is employed part-time in most cases. Salaries are paid from many sources—N. Y. A., service charges and college funds.

Financing arrangements for these film libraries usually are provided by the enrollment fees of each school, about $50.00 per year. Another method is to have each school deposit one or more new films and pay an additional service fee to cover handling.

The author concludes that the film libraries now operating have engaged in careful planning and have ample provision for expansion of services. They are helping to bring educational films to rural and poorly financed communities where such service might otherwise have been impossible.

■ 5 Celluloid Servants

A series of brief statements summarizing a survey on the status and problems of projected visual aids in the secondary schools of Maine. The author concludes that these aids are used as teaching tools, not as ends in themselves; that teachers need help in putting them to effective use. There is a strong likelihood, from the reports, that the use to which the aids are put can be considerably improved.

■ 6 Experiment in Virginia

A group of 30 schools in southwest Virginia is experimenting with instructional sound films. The study at Radford State Teachers College was started under the direction of its president, Dr. D. W. Peters and will continue for two years. All films to be used are Erpi fiilms. Each of the 30 cooperating schools agreed to pay $100 for the purchase of two films, to be paid up in two years. The sixty films thus bought will be cleared through the Teachers College. Films are scheduled 30 weeks in advance. Evaluation sheets are filled out for each film. Teachers are to be trained to operate machines. Miss Ruth Livermon gave a course last summer in the use of visual aids at the Teachers College. A list of the film units (two titles in each) is appended.

■ 7 Making Way for Audio-Visual

The purposes and plans of the newly created Division of Audio-Visual Education in the Virginia State Department. A handbook for teachers is already available. During the year information will be collected on the activities within the state and an exchange of ideas will be encouraged. Regional film and transcription libraries will be established in teachers' colleges. Assistance in organizing a program of audio-visual education will be given to teachers and principals.

■ 8 Teaching Conservation

Conservation of the nation's wealth of forests and minerals, wiser use of the soil and water, and protection of wild plants and animal life call for united effort of all citizens. The condition of the fertile soil in our land has been greatly threatened through improper farming methods. Four-fifths of the original forests are gone, minerals are being rapidly depleted and many other of the nation's resources are being threatened unless there is a concerted program of conservation.

Motion pictures can help to promote desirable attitudes toward conservation. A few of the films available through government agencies have been reviewed by the author in a most unusual and helpful manner. Consult the original article for further details about the ways in which such films as "Trees That Tame the Wind," "Stop Forest Fires," "Re-Creation," "The Tree of Life," "The River," "Rain for the Earth," "Men Against the River," "Seeing Yosemite Park," "Grassland," "The Price of Progress," and "Rain on the Plains" can be adapted to a consideration of problems related to conservation.

■ 9 Visual Aids Handbook

An evaluated list of the films available through the State College. The comments accompanying each reference were collected over a period of time with the aid of the teachers who were using the film library. Evaluations are available as separate sheets or in bound form. Further information, based on additional teacher experience with specific films, will be released from time to time. This type of handbook has great promise as a trail blazer toward a more integrated relationship between film libraries and

the classroom. (William G. Gnaedinger replaces Ford Lemler as Head of the Bureau of Visual Teaching.)

■ 10 Enid's Museum

The Enid Senior High School, during the past twelve years, has undertaken the development of a museum, under the supervision of a science teacher. Various clubs in the school have contributed to the museum. The Taxidermy Club, in addition to the birds, mammals and flowers they have collected, made book ends, rugs and other novelties. Bird-banding was carried on in cooperation with the U. S. Biological Survey. Pictures from the National Geographic and other magazines have been mounted and filed. Alumni of the school continue to help with the museum's activities.

■ 11 Producing School Movie

A film made by the junior high school in Palo Alto, California was used for public relations to present the activities of that school. There are five important steps in producing a movie: a) securing the proper equipment; b) writing of a good script; c) staging rehearsals and planning the shooting; d) planning and making titles; and e) editing and titling. The 5-reel, color film which resulted has been shown to thousands of persons, at the N.E.A. and the World's Fair in California.

■ 12 Pupil-Made Slides

Pupil-made slides are used in the elementary school from the fifth grade up. Seventh grade children made slides for nature study, of birds, animals, and other subjects. Graphs, cartoons and sketches were put on slides for the safety campaign; experiments with air and water pressure for understanding how a plane flies were shown on slides.

One group of children is preparing a set of slides on the topic, "Our Trip to the Museum."

■ 13 Making Lantern Slides

The popularity of Kodachrome and Dufaycolor has resulted in renewed interest in lantern slides and transparencies, and the rediscovery by thousands of amateurs of a photographic field which was intensely cultivated by their predecessors in days when slides had a very important place in photography. In line with this increasing interest in slides, *Camera Craft* presents a series of three articles which discuss all phases of slide making.

The first article deals with the sizes and types of slide materials available, and the printing of slides, both by contact and projection. The second installment treats exposure and development of slides, including a variety of formulae. The final article describes methods of toning slides in various colors, together with the retouching, binding and finishing of the completed slide.

■ 14 "Fantasia"

An editorial statement about the terrifying aspects of the recent Walt Disney productions. The films are regarded as a hindrance to children's appreciation for the music involved as well as for the great stories from which they have been taken.

"Where, oh where," the author wails, "is the Walt Disney who created Mickey Mouse and the Three Little Pigs who earnestly struggled to ward off the big, bad wolf and win security? And where is the taste and conscience of a fine publishing house that offers Fantasia as a picture book for children?" Teachers and parents will doubtless second the motion.

■ 15 History in the Movies

Notwithstanding the differing philosophies, aims and methods of the industry and of the educator toward history in motion pictures, and in spite of the many handicaps which hinder complete accuracy, pictures dealing with history can be at once entertaining and educationally useful. The services of the regular staff (employed by the industry) might have more effective results were the services of the history specialist employed more frequently and more generally. This point of view is open to question by teachers of history who should be and are concerned with accurate details rather than with glamorizing history. Many of the true facts involved in historical episodes are more thrilling than the false trimmings that are sometimes added because of a mistaken sense of "box office." Why should educators apologize for Hollywood's distortion of historical facts?

■ 16 "They had seen the Picture"

A stimulating article, describing this teacher's experience in developing movie discrimination, which leads her to conclude: "Such experiences make me a firm believer in the discussion method of teaching discrimination in movie-going. At the end of the unit on movies the students should be reading more books and seeing fewer movies. No more worthy goal for photoplay appreciation could be expressed. Interestingly enough, the author was challenged into this study of film discrimination by the dearth of articles on the subject that met her needs, and by the fact that the Dale, Dunn, Hoban and Schneider summary had to drag in a unit of work which dealt very indirectly with a film. The unit was based on the book, *Arrowsmith*. The teacher was quoted as having written, "Several Pupils had seen the motion picture." Hence the title of this article.

BOOK REVIEWS

A School Uses Motion Pictures—The Staff of Tower Hill High School, Wilmington, Del.—American Council on Education, Washington, D. C. Series II, Vol. IV, No. 3. Sept., 1940. 118 p. $1.00

There are at least two values implicit in the Motion Picture Project's new publication. First it fills a much-needed demand for specific details about the classroom use of films on various educational levels. Secondly, it represents the work of an entire staff in studying, trying out, evaluating and summarizing the use of films in the curriculum. It is to be regretted that the wealth of experiences engaged in by the teachers and the children during the year was limited to so small a bulletin. Doubtless many valuable items of information have had to be omitted for lack of space.

The book begins by providing the setting of the school and its curriculum through excellent photographs. Thus we get to understand the variety of ages, interests, abilities, backgrounds and ideals among students in the 12-year curriculum at Tower Hill. Each of the subsequent chapters is a summary. Chapter III summarizes the techniques and outcomes of films used with primary children. Chapter IV describes the use of films in social studies for the fourth grade, and the other grades. An interesting comparison was made between the reactions of the fifth grade group and the eighth graders to the same film. The teachers concluded that fifth-grade children are most attracted to the action and story of a film, that they remember what they see, but that they make fewer interpretations. The eighth grade group mentioned fewer specific incidents but they were able to generalize and interpret the film.

The use of films in the science curriculum is described in Chapter V, including the second grade group, the fourth grade and all of the upper grades. Under the heading "Communication and Expression," Chapter VI summarizes the ways in which films were found helpful in teaching propaganda analysis, English, creative expression in art, etc.

The teachers conclude that motion pictures helped the children to grow in ability to think intelligently. Even the five and six year old children were able to use the information shown in films to make simple generalizations of relationships.

Secondly, the films were seen to promote cooperative action on the part of the group. Group discussion, committee investigations, group dramatizations and art projects were the outgrowth of the common group experience of seeing a film. Illustrations of the many ways in which we live and work cooperatively were provided by several of the films. Thirdly, the films helped the children to see the relationship of art to other forms of expression; they also helped to sensitize the children to vital social problems of their own community. The films were also found to be effective in promoting wholesome growth in mental and physical health. Lastly, the films afforded an excellent avenue of communication and served as the basis for creative expression.

This volume should be read by every teacher before he or she next orders a film, because it will no doubt suggest a variety of new techniques. It will at least highlight the importance of trying out a variety of ways of using a variety of film subjects. This report is eventually to be supplemented by reports from two other cooperating centers. Chalk up another vital contribution for the Motion Picture Project.

Among Ourselves

Notes from and by the Department of Visual Instruction of the National Education Association.

Conducted by JAMES D. FINN
Colorado State College of Education, Greeley

To the Members of the D.V.I.:

When the roster of the Department appeared in last month's SCREEN, I checked back in previous issues to get comparative statistics on memberships. It is unfortunate, I think, that the practice of printing this roster has not been continuous and I hope that future administrations will make it a Department policy. However, the record yielded the following information:

November 1936	317 members
February 1937	337 members
September 1937	415 members
May 1938	422 members
June 1940	545 members
January 1941	551 members

Because memberships in the Department run from the date of receipt, this means that there are expirations every month in the year with a resultant continuous fluctuation in the total figures. Your secretary has analyzed the "inactive" file and found that there are a large number of cards here of members who belonged for only one year. It is difficult to determine the reasons for this, but partly it has been due to the impermanent lure of a nearby convention or an election of officers. This Department deserves not only the slow but steady growth of the past few years, but a rapidly accelerated growth. We must hold the members we have and constantly seek new members. You can help by (1) promptness in renewing your membership when you receive word of expiration, and (2) reviewing the roster in last month's SCREEN and sending names to your Secretary of those people you know whose names should have been included in that listing.

Membership will be only one of the many problems to receive the careful consideration of your Executive Committee when it meets at Atlantic City on February 26. It appears that all but three of the fourteen officers and Executive Committee members will be present. At the Business Meeting of the Department on February 24, in addition to progress reports from the Zonal Plan, Yearbook, Field Experiences, and Auditing Committees, there will be opportunity for full discussion of Departmental affairs. I wish all of you could be present.

Sincerely yours,

PAUL C. REED, *President*

P. S.—You should be thinking of the people you will wish to nominate to serve as president, first vice-president, and second vice-president for next year. In accordance with the provisions of the Constitution, nomination ballots will be sent to you within the next month.

Two Letters

Acting upon the resolution in reference to special postal rates for films passed at last summer's meeting of the Department, the secretary, Ward C. Bowen, sent a copy of that resolution to the Postmaster General with the following letter:

"Hon. Frank C. Walker
The Postmaster General
The United States Post-Office Dept.
Washington, D. C.

"My Dear Mr. Walker:

"Allow me to submit to you at this time a resolution duly passed by vote of the Department of Visual Instruction at the time of its annual meeting at Milwaukee, Wisconsin. This resolution should have been submitted to you at an earlier date. The delay was caused in part by change in the officers of the Department.

"May I call your attention to the fact that the resolution includes two separate requests: first, that instructions might be issued to postmasters to give preferential handling to shipments of educational films in order to avoid delays and disappointments incident to the showing of such films in schools; second, that special rates for parcel post shipments on educational motion pictures be established, thus placing films on the same footing as books, which now enjoy special low rates.

"May I further emphasize the fact that the Department of Visual Instruction in passing this resolution had in mind only films of a strictly educational character. It was not the thought of the members of the Department to make any such request relative to films designed for entertainment only.

"May we respectfully request your careful consideration of this resolution. We shall be grateful for a reply at your convenience; such reply will be forwarded promptly to the Executive Committee of the Department.

Respectfully yours,
WARD C. BOWEN
Secretary-Treasurer"

WCB:W
resolution

Here is a copy of the reply from the Third Assistant Postmaster General:

"Mr. Ward C. Bowen,
State Education Department,
Albany, New York

"My dear Sir:

"The Postmaster General has referred to this office for reply your communication of December 6, accompanied with a copy of a resolution adopted at the last annual meeting of your organization held in Milwaukee, Wisconsin.

"We note the resolution requests the Department to give consideration to:

"(1) Issue instructions to postmasters throughout the country to give preferential handling to packages containing educational films when addressed to schools so as to insure their inclusion in the first delivery after receipt in the sending and receiving post offices.

"(2) To establish rates of postage for educational films similar to the reduced rate applying to books.

"We appreciate having the views of your organization and the matter will be given consideration along with the many other suggestions which are being received in the Department.

Very truly yours,
(Signed) RAMSEY S. BLACK,
Third Assistant Postmaster General"

This reply gives no indication that there will be immediate action to bring about the desired special attention to the handling of films by the Post Office Department. If this is still a matter of concern to members of the Department of Visual Instruction, some new and more effective procedure must be evolved to impress the Post Office Department with the importance of the request. Ingenious suggestions are in order and will be welcomed by your Secretary and President.

Notes from the Field

Indiana

The Muncie Audio-Visual Conference held at Burris Laboratory School of Ball State Teachers College, Muncie, Indiana, on Saturday, January 11, 1941, marks a new series of meetings in Indiana. The Muncie Conference was sponsored jointly by Ball State Teachers College, The Muncie Public Schools, and Indiana University Extension Class in Audio-Visual Aids.

Among the speakers were Edgar Dale of Ohio State University; L. C. Larson, W. W. Wright, I. O. Foster, and Karl W. Bookwalter all of Indiana University; and Evelyn Hoke of Ball State Teachers College.

General topics were the "Educational Use of Audio-Visual Aids" and "Organizations and Administration of a School Audio-Visual Service." Group seminars and discussion panels using classroom teachers and administrators working in various curriculum areas featured the meeting. There were also sections on the Museum Workshop, School-Made Films, and Educational Motion Picture Studies at Indiana University. The last part of the meeting was devoted to the presentation of two documentary films *The City* and *The Children Must Learn.*

New England

The joint meeting of the New England section of the Department of Visual Instruction of the N. E. A. and the Connecticut Audio-Visual Education Association was held at the Connecticut State Teachers College in New Britain, December 14, 1940. The meeting, held in the science lecture hall, was opened with a message of welcome by Dr. Welte, President of the Teachers College.

The first speaker on the morning program was Dr. O. E. Underhill of the science department of the Teachers College. Dr. Underhill spoke of one way of meeting visual education needs in the Teachers College through the organization of a visual education service club as an extra-curricular activity. This organization in addition to providing valuable experience to its members in the visual education field, also provided visual education services for the faculty, and engaged in motion picture production and photography.

Mr. Fitzgerald of the Wethersfield High School next gave an illustrated talk on the uses of audio-visual aids in a modern social studies classroom. He started by showing how statistical facts could be easily visualized and readily used in classroom work through an interesting adaptation of a rubber stamp technique. Mr. Fitzgerald stressed the importance of having all kinds of visual materials available in the classroom in such a form that it would be readily accessible to all students. Slides were used to show the various methods of utilizing available room space for bulletin boards, files, cupboards, bookcases, magazine racks, and other devices to bring up-to-date material to the attention of the student.

Professor Abraham Krasker of the Boston University School of Education next spoke on the topic, "Some Uses and Abuses of Visual Education." In his talk, Professor Krasker pointed out that he was more concerned about the lack of use of available teaching aids than he was about the few instances of abuse in connection with the use of visual aids.

The luncheon and business meeting was held at the conclusion of the discussion.

Several meetings of interest to teachers in this region are scheduled for the near future. The New England section of the Department of Visual Instruction of the N.E.A. held another meeting February 1, in Providence, Rhode Island. The Connecticut Audio-Visual Education Association is holding several meetings in various regions of the state during the coming year.

Louisiana

The Audio-Visual Section of the Louisiana Teachers Association met in Monroe the afternoon of November 18th, and on November 19th held a joint meeting with the Louisiana Branch of the Department of Visual Instruction, of which Mr. R. H. Mount is president. This was the first organized meeting of the Branch. Various visual aids were covered on the well-planned program: "Field Trips and School Journeys," by Bernice O'Neal, Louisiana Polytechnic Institute (Ruston); "The School-Made Moving Picture," by Ardis Cawthon, Louisiana State Normal College (Natchitoches); "The Use of the Camera and the Development of the 2x2 Colored Slide," by Anthony Reese, Fortier High School (Monroe); and "Demonstration of a Unit of Study with the Use of Visual Aids," by Myrtle Rodgers and members of the Faculty of Georgia Tucker Grammar School (Monroe).

The Louisiana Branch issues a monthly Newsletter on Audio-Visual Education to its members. The January bulletin reprints an article by member W. C. McClendon, from *School Executive* for September, 1940. Title of the article is "Objectives and Techniques for the Use of Films in the Teaching Program."

Ohio

The Visual Instruction Section of the Ohio Education Association held their conference in connection with the general association meeting on Saturday morning, January 4, in the State Office Building, Columbus. The officers of the Visual Instruction Section are: President, Superintendent A. C. Pence, Coshocton; Vice-President, County Superintendent R. M. Eyman, Lancaster; Secretary, Superintendent E. E. Higgins, Gallipolis.

The program included the viewing of several motion pictures, *Children of Japan, Bulgaria, Planters of Colonial Virginia, Vacation Safety, A Perfect Tribute,* and *Lincoln in The White House.*

An interesting sidelight of the meeting is the fact that a prize of $25 will be given to the member of the

O.E.A. who writes the best comparative essay on the merits of the last two pictures. Essays must not be more than 600 words and must be filed with the program chairman not later than February 1. Judges' decision is final.

In addition to the appointment of committees, the election of officers, and the reports of committees, the meeting also included a demonstration of the Geoscope by M. W. Hunter of Sharon Center, and a report on the Visual Exchange by B. A. Aughinbaugh, Supervisor of Visual Instruction, State Department of Education.

Note to Members of the D.V.I.

We should like very much to start a personal section in this column regarding the activities of members of the D.V.I. If you have any information on yourself or anyone else, such as a new job or the carrying out of an experiment, or for that matter the taking of a trip, or an addition to the family, please communicate with us.

As a starter this week we wish to publish the following item:

The writer has it on good authority that Floyde Brooker, who has been Assistant Director of the Motion Picture Project of the American Council on Education since its beginning, has accepted a position with the United States Government in connection with the National Defense Program.—J. D. F.

PROGRAM

Winter Meeting of the Department of Visual Instruction

February 24, 25, 26—Atlantic City—Hotel Traymore

(Reprinted from January issue)

Monday, February 24

First Session 9:30-11:30 a.m.—Submarine Grill

Greetings from the New Jersey Visual Education Association—Arthur M. Judd, President, New Brunswick, N. J.

President's Report: *The Challenge of the Unsolved Problems*—Paul C. Reed

Criteria for Selecting Motion Picture Projection Equipment—John A. Maurer, Chairman, Committee on Non-Theatrical Equipment, Society of Motion Picture Engineers

A Critique of Summer Courses in Visual Instruction—Floyde E. Brooker, American Council on Education

Business Meeting

Luncheon—Informal—Form your own party and eat where you wish

Second Session 2:15-4:30 p.m.—Submarine Grill

Theme: Visual Aids in Defense of Democracy

Address: *Education in Defense of Democracy*—Ralph W. Tyler, University of Chicago

Report: *The Visual Aids We Have*: A Verbal and Visual Review—Blake Cochran, American Council on Education

(There will be a screening of some of the best films related to the theme of the meeting.)

Discussion: What Shall We Do with Materials Available? What Should We Do to Stimulate the Production of Needed Materials? What Precautions, if any, Should Be Taken in the Use of these Materials? Can These Materials Be Used to Coordinate the School and Community Program for American Defense?

Tuesday, February 25

Third Session 9:30-11:30 a.m.

9:30-10:00—Rose Room—Introducing the Chairmen of the Group Meetings to follow. Each will present briefly the problems and questions to be considered in his meeting.

10:00-11:30—Group Meetings.

Group A—Rose Room—*Can the Schools be Better Served?* A discussion of the problems of visual aids distribution—B. A. Aughinbaugh, Chairman, State Director of Visual Education, Ohio

Group B—Fountain Room Balcony, East—*What Visual Aids are Schools Producing?* Including a discussion of "school-made" motion pictures—William G. Hart, Chairman, Dearborn, Michigan

Group C—Fountain Room Balcony, West—*How Can We Bring About Better Utilization of Visual Materials?* A discussion of pre-service and in-service training—Ford L. Lemler, Chairman, University of Michigan

Fourth Session—Luncheon Meeting
—12:15-2:00 p.m.—Submarine Grill

Reports of the Morning Group Meetings by the Chairmen

The Wartime Use of Motion Pictures in Britain—Richard Ford, British Library of Information

Fifth Session 2:15-4:30 p.m.—Submarine Grill

Theme: Free Materials—A Blessing or A Blight for Education?

A Symposium of Ten-Minute Opinions—Edgar Dale, Chairman.

O. H. Coelln, Editor, Business Screen Magazine

John E. Hansen, Chief, Bureau of Visual Aids, University of Wisconsin, representing a state film library point of view

Boyd B. Rakestraw, University of California, representing another film library point of view

Godfrey Elliott, Director, Audio-Visual Aids, Mercer County Schools, Oakvale, West Virginia, representing a point of view of the public schools

Ernest LaFollette, John D. Pierce Junior High School, Grosse Pointe, Michigan, representing the teachers who use free films

William H. Hartley, State Teachers College, Patterson, New Jersey, presenting standards for evaluation

Edgar Dale, presenting a preliminary summary leading to general discussion

General Discussion

Wednesday, February 26

9:30-12:00—Meeting of the Executive Committee
Meeting of the Committee on Field Experiences
Meetings of other Committees as called by Chairman

In and for the Classroom

Conducted by WILBER EMMERT
State Teachers College, Indiana, Pa.

THE OPAQUE PROJECTOR AS ONE AID IN TEACHING GENERAL SCIENCE

W. H. DURR
George B. Miller Junior High School,
Aberdeen, Washington

THE motion picture as a teaching aid in General Science has been successfully used in the Aberdeen schools for a number of years. With the purchase of an opaque projector for the visual education department, it was felt that this new instrument constituted a device, which if properly used, could contribute much towards the thorough mastery of those concepts encountered in the General Science Course. For this machine made readily available, and at little cost, a wealth of pictorial material which had formerly been neglected.

In an effort to determine some of the values of the opaque projector as a visual-sensory aid, and to work out a technique for its use, one unit of General Science was selected for this experimental work. The study was not intended to in any way minimize the values of the motion picture, the demonstration, experimentation, etc., but to personally evaluate the opaque projector as a teaching aid in this area. Briefly stated, the aims were: (1) To experiment with the opaque projector, determine what materials were available, and how these might most effectively be used; (2) To have the pupils work out their own pictorial illustrative material, and analyze the value of this method; (3) To ascertain the value of this technique for developing the scientific method of study. Approximately one and a half times as much time was spent on this unit as is ordinarily devoted to it.

Accordingly, after the showing of one particularly fine film, the class went back and analyzed the picture, scene by scene, to see how the film had brought out different points to be learned from the unit through the use of pictures. For example, potential energy was illustrated through the use of a picture of water back of a dam; sticks of dynamite represented chemical energy; and a picture of a man using a lever illustrated a simple machine.

Following this analysis, the class concluded that many things in their science course could be illustrated with pictures carefully selected, and similar to those used in the film. This resulted in a desire to work out a scenario of their own on some unit of the course. While some pupils were eager to make a motion picture, it was felt that flat pictures which might be used with the opaque projector would serve a similar purpose. After much discussion it was pointed out that while the still pictures would not show motion, motion was not essential to the understanding of much scientific material. Furthermore, motion is a relative concept, and many still pictures are capable of giving the illusion of motion.

As a result of this desire, the class divided into committees to work on the various phases of the unit selected. Each committee selected a chairman to direct the work of the group, and a secretary to record the plans for his committee. Thus definite plans could readily be submitted when the whole class met to coordinate the plans for the final presentation.

Each committee immediately entered upon the study of its section of the unit, and determined the essential points it wished to illustrate. After listing the concepts to be illustrated, it was faced with the problem of deciding how best these ideas might be portrayed.

The science department had been collecting pictures for classroom purposes for several years. However, with the incentive of this project, the class members began bringing in great quantities of illustrative material. Both the science picture files and the new materials being brought in were available to all committees. It was soon evident that a set of standards for the selection of pictures would be needed if the most value was to be obtained from this study.

After considerable study the following standards were accepted as those to be used in this enterprise.

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Size—The picture or portion of the picture to be used must be not greater than six inches square. (This being the size of the aperture of the projector).

Color—Natural color, where obtainable, was preferable to black and white prints.

Clarity—The picture must be a good, clear print. Faded or discolored prints were not to be used.

Number—Only one picture was to be used for each idea expressed. This was to avoid needless repetition. However, a series of pictures might be used to develop a concept.

All the material was gone over by the various committees for the purpose of selecting that which best illustrated the various aspects of the scenario. Those pictures which passed the standards set up by the group were mounted on cards for projection. Those items which did not exactly portray the concepts which the committees considered essential to this unit, but which might prove useful in some other phase of classroom work, were filed for future needs. When any committee was unsuccessful in locating pictures which they needed, they prepared drawings of their own to delineate the concept under consideration. The class soon learned that to carry out the type of work it had set for itself, it would be necessary to develop a thorough understanding of the unit. With the discovery of this fact, added interest in the project accrued. A determination to thoroughly master this unit took hold of every member of the class. While class time was devoted to some of the work of selecting and mounting the pictures, most of the work was done outside of class time, in the library, the study period,

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and at home. On numerous occasions, pupils who were working after school closed, had to be sent home.

Finally the pictures were all selected, prepared, mounted, and ready for showing. The class then decided that a commentary should be prepared to accompany the showing of the pictures. The narration was written by a committee selected for that purpose. The whole class entered into the criticism of the draft presented by the committee. After it was finally whipped into shape, a rehearsal was held with special emphasis on: clearness of projection; timing of the narration with the changing of pictures; commentator's enunciation, voice, and emphasis; and over-all timing of the presentation to fit into a definite period of time.

The final stage of the project was the presentation of the completed unit with the aid of the opaque projector before the other sections of General Science classes in the school. This served as a review for the class, and provided a splendid demonstration lesson to those who were fortunate enough to witness the production. Many who saw it claimed that it was one of the finest visual lessons they had ever seen.

In addition to the three objectives definitely stated above: to find materials available to use with the opaque projector; to have pupils work out their own illustrative material; and to determine the value of this method for developing a scientific method of study —, it was found that the pupils developed tremendous interest in their own creations; test revealed thorough mastery of science concepts; it provided opportunities for self expression; and that study habits acquired carried over into topics studied later in the course.

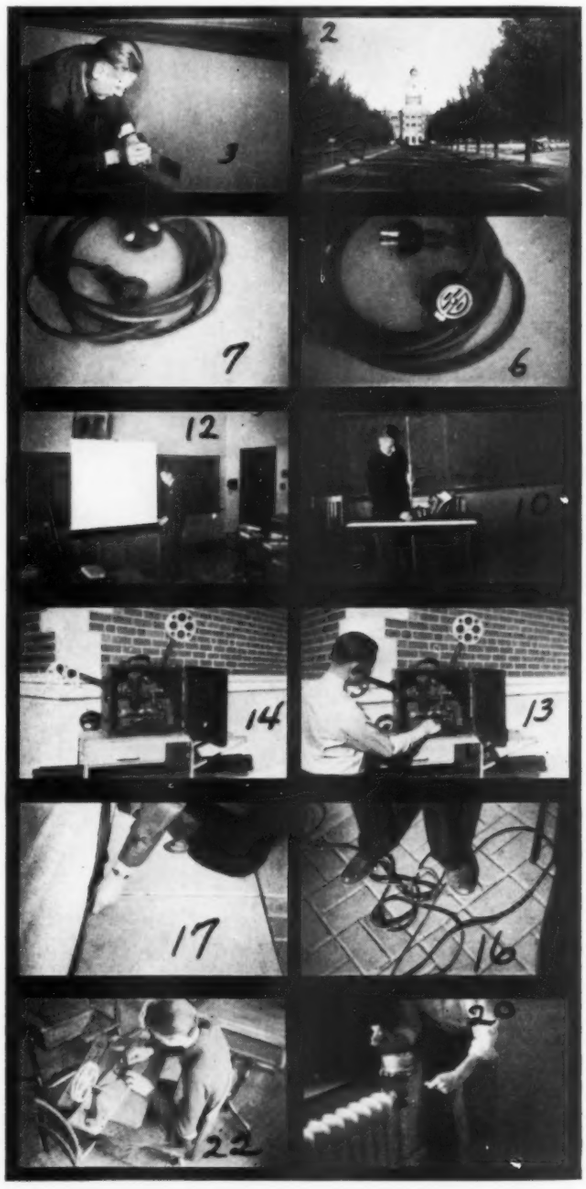
From the results of this experiment, it was possible to enlist the interests of other teachers in the use of the opaque projector as a valuable teaching aid. While half more time was spent on this unit that is usually devoted to it, the results were most encouraging. The skills and techniques developed during this study will enable the teachers to accomplish as much or more in the same amount of time generally devoted to the study of a unit. The new opaque projector is now in great demand.

FILMSTRIP DEPICTS PHYSICAL ASPECTS OF VISUAL EDUCATION

WILLIAM S. GREEN
Supervisor of Visual Education
Denver, Colorado, Public Schools

A FILMSTRIP entitled "Some Physical Aspects of Successful Visual Education," prepared by the writer for teaching purposes in Denver schools, has been shown in various other localities and has evoked marked enthusiasm. The material consists of a strip of twenty-four pictures, with twenty-four explanatory paragraphs in the form of a syllabus to accompany the pictures. The explanatory material was also reproduced on a phonograph to run thirteen minutes synchronously with the pictures. Presented herewith are reproductions of half the pictures on the strip and the entire narrative accompaniment for all the twenty-four pictures.

(1) Much has been written and said about how films and other visual aids should be used from an educational point of view. In many instances the physical problems that arise in securing successful film lessons are regarded as minor details, worth little consideration as compared to educational outcomes.



Selections from teacher-made filmstrip.

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AUDIO-FILM LIBRARIES

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Some of these physical things to do are stressed and mentioned in the lids of propector cases, film catalogues, and film containers, especially information relative to proper threading and operation of the movie machine.

In this film strip story let us consider some of the more important things that will help us profit to the utmost in our investment in projectors, screens, and other visual equipment.

(2) This is East High School as seen from the Sixteenth Avenue approach. It is a large school with a student body of approximately 3000 students, yet the problems involved here and in the smaller school are quite similar. The expense of darkening all of the rooms with opaque shades would have been prohibitive. The problem was solved by using sets of portable shades that may be used in any desired room.

(3) Testing an electric outlet is a simple thing to do with this little neon gadget. If alive the light goes on, if dead, one must replace a fuse before current is again restored. At least a "dead" fuse is the commonest cause of trouble.

(4) Here is a close up view of the tester. It is small and may be easily carried in the pocket. A dead electric outlet may delay or deprive the class of a film that was especially important.

(5) These are familiar objects to all of us, yet the lack of any particular item of this kind often spells success or failure of a program. Much valuable time is lost hunting for double sockets, plugs, fuses or other gadgets while the audience waits, often impatiently.

(6) Serviceable extension cords like this one are indispensable. Their sturdy construction makes them much safer and they last longer. They seldom "short out" if they are properly made and are very useful when the electric outlet is some distance from the projector.

(7) This type of cord is less desirable because of its flimsy make up. It is not as safe nor will it last as long.

(8) Here is a projection table in the classroom with the student operator. It is sturdily built, made of angle iron, fitted with strong rubber casters and may be taken to any room in the building. It has a space provided to carry a screen, opaque shades for the room, film cans, extension cord and all other things needed for a film lesson. It is a complete portable unit in itself.

(9) We find rubber casters of this general type indispensable on projection tables. The tables are of such a height that an operator can easily manipulate the machine and at the same time the projected picture is at the correct angle and height for the screen.

(10) Screens of this type may be quickly adjusted to the proper height. It is important to remember that they must be at right angles to the beam of light coming from the projector, otherwise, the picture will be out of focus at one side of the screen or at the top or the bottom, if the projector is too high above the screen or too far below it. Remember, also, to make the projected picture exactly fill the screen. This is controlled by the distance the projector is placed from the screen.

(11) This screen is a home-made affair consisting of a white window curtain in a wooden box to keep it clean and to pro-

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Developed from field studies among 14 primitive races in different parts of the world. The data are available in 8 illustrated lectures in either film strips, 2 x 2 glass slides, or standard glass slides, with descriptive manuals and an illustrated outline.

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8. American Indians—primitive, semi-primitive and modernized

• • • • •

Comments from a Teacher:

*"Five series of strip films were shown, using a small Tri-Purpose projector. We all agreed that the projection lantern itself was entirely adequate, and a class room of ordinary size does not have to be entirely darkened while the slides are being shown. The manuscript, which is well adapted for junior and senior high school age, can very easily be followed as the pictures are being shown. *** We all feel that a general use of these films in the science department next year would give results that would mean a forward step in education."*

From a State Department of Health:

"These strip films are truly wonderful and will accomplish more than all the other teaching aids combined in promoting a genuine active interest in dental health in the junior and senior high school age groups."

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Double-frame film strip lecture, averaging 50 illustrations, with manual.....$ 3.50

ALSO AVAILABLE: An adapter attachment for standard 3-1/4x4 lantern slide projector converting it for showing double-frame film strips and 2x2 glass slides.....$18.00

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ART SLIDE CO., Sippo Lake S-2, Canton, Ohio

tect it. It is not as reflective as a beaded screen but is very easy on the eyes.

(12) The screen may be placed on the teacher's desk as shown here. This puts it at about the proper angle and relationship in the average classroom.

(13) Threading the projector is very important. Improper threading results in film damage which is costly as well as unnecessary. Follow the simple directions given you with your projector and your results will be gratifying as well as satisfactory.

(14) This projector rests upon sponge rubber cushions which help reduce vibration to a minimum. The cushions are made from a kneeling pad. The "blimp" case on this model also helps in making it a silent job for classroom use.

(15) A few simple tools like these come in handy at times. In the strictest sense the oil cans in the upper right are not tools, but lack of oil has been the cause of a great deal of expense and trouble as we all know.

(16) Oh! Oh! Oh! Oh! When using sound films lay your speaker cord in such a manner that it will not take the beating it is getting here. Coil it neatly, see that it is free from kinks and out of the way as much as possible.

(17) Here, a speaker cord is being laid close to the wall where it is least likely to be walked upon. Care should also be exercised to secure satisfactory results by placing the speaker in the proper relation to the screen and the audience.

(18) Darkening a room with a set of portable opaque shades is illustrated here. In this picture a student operator is shown laying an opaque window curtain in the window sill. The tan shades were first raised on all the windows in the room.

(19) The cord on the opaque shade is next placed over a hook in the wood work at the top center of the window. The operator holds the shade with one hand as it unrolls and pulls the cord with the other hand.

(20) When the shade is fully raised the operator ties the cord to a radiator or desk with a knot easily tied or untied.

(21) When the film lesson is over and the shades are taken down one boy rolls up the shade as another slowly releases the cord. Two boys make an effective team in doing these simple but necessary jobs. This liberates the teacher to give her full energy to points of the film lesson. The teacher should, however, know how to operate the projector and all the other necessary details. If she does the student operators can look to her for help if they are stuck and she can control the situation much more intelligently.

(22) A good rewind and splicing outfit are pretty much of a necessity. Films can be built up on to one reel which saves time in class ordinarily spent in threading up the next reel. Breaks in the film or splices that come loose may be quickly repaired with a good splicing outfit. These are points a good operator knows how to do.

(23) A classroom scene at East High school immediately after a film has been shown. When the physical aspects and educational aspects of visual education are in close harmony, and work well together—then and only then will results be as we wish to have them.

(24) This film strip was recorded personally by Mr. R. C. Mulnix of the Mulnix Sound Systems of Denver, Colorado, on a Presto Recorder. The photographs are the work of Norman Caroll, a student operator of East High school. Your narrator is William S. Green.

Resolutions of Ohio Visual Instruction Section

Be It Resolved That:

The Visual Instruction Department of the Ohio Education Association adopt the following platform of principles:

1. The place of visual perception in the learning process is too widely known and too generally accepted to need comment. Such place is of first importance in the learning procedure.
2. We call attention to the phenomenal increase in all types of materials for bringing the world into the classroom and enriching the experiences of the children through visual instruction.
3. We urge that more and more of these materials be made available to all types of schools.
4. We further urge that curriculum construction take into careful consideration making the same an integral part of the courses of study.
5. We suggest to teachers and administrators that there is need for an evaluation of visual instruction materials and procedures. This should provide a plan for preparation, presentation, discussion, and testing.
6. We urge that all Boards of Education continue and, when possible, increase the budgets for visual aids.
7. We emphatically urge that all teachers and school patrons petition the legislature to continue support of the present policy for financing visual education materials in the State Department of Education. The present censorship fee should be continued. It is our belief that in the standards set up in the school study of commercial film the motion picture industry is getting value received.
8. Finally, we go on record in commendation and praise of the Visual Instruction Exchange for its excellent service in selection and distribution of films.

W. Dwight Darling
C. M. Layton

Data on Summer Courses Wanted

The Educational Screen **is again gathering information on all summer courses in visual instruction, for publication in the April and May issues.**

Any reader knowing of such courses to be given next summer is earnestly asked to send us names of the institutions—with or without further data, such as: title of course, name of instructor, dates of duration, credits, contents of course.

"Elementary Operations on the Engine Lathe"

A new sound film that gives vital aid to schools in the training of mechanics for NATIONAL DEFENSE

THIS skillfully prepared sound film provides invaluable help in the detailed demonstration of modern shop practice. It is replete with carefully planned, superbly photographed full-screen close-ups which isolate and greatly enlarge the critical action involved in every significant procedure. It not only permits demonstrating to the whole class at once, but enables each student to follow the action, step by step, to even greater advantage than would be possible from a position directly at the side of the instructor. The effectiveness of the film is further heightened by full explanations, in sound, of every step.

All schools now teaching or planning to teach shop practice in connection with the National Defense program will welcome *Elementary Operations on the Engine Lathe.* It covers correct methods for exact alignment of the lathe . . . detailed procedures involved in facing, straight turning, and squaring a shoulder . . . working accurately to dimensions from a mechanical drawing . . . characteristics and selection of the principal cutting tools . . . a comprehensive exposition of the use of micrometers in relation to the graduated dials. One reel 16-millimeter (sound) — $45; immediate delivery.

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(See September 1940 issue, EDUCATIONAL SCREEN, page 282)

H. Skadsheim, Visual Services
Berrien Springs, Mich.

School-Made Motion Pictures

By HARDY R. FINCH
Head of English
High School, Greenwich, Conn.

Member Committee on Standards for Motion Pictures and Newspapers of the National Council of Teachers of English

SELDOM do schools make films on topics that are the subjects of controversy in the community. That is why the film, *Housing in Flint,* reported below should be of unusual interest to school film makers. The problem of housing was being discussed in the city of Flint, Michigan; so the students of the Central High School decided to find out actual conditions for themselves and make a documentary film of their findings.

According to Ruth C. Henry, director of the film, *Housing in Flint* (450 feet) was produced by the Central High School students. They were studying a unit on Housing at the time that community participation in a United States Housing Administration project was the subject of an impending election.

In the plan of the film, "Flint's houses were divided, chronologically, into four groups. Good and bad examples from each period, in the proper proportion to their actual numbers, were photographed. The community research and planning bureau gave us the necessary advice. Hence, the film is an accurate sampling of Flint housing. The plan is as follows:

A. Houses before the World War period
   1. Houses that have maintained their value
   2. Houses that have become run-down because of adverse surroundings
   3. Houses that have become veritable slum areas

B. World War
   1. Civic Park—a General Motors project
   2. Private buildings

C. Rapid building of the 1920's
   1. Expensive homes
   2. Outskirts of the city—no conveniences
   3. Middle range

D. Trends in the 1930's
   1. Trailor camps
   2. Modern styles

California

Four films (400 feet or less in length) are products of the Long Beach Public Schools. According to N. Evelyn Davis, audio-visual supervisor, they are: *Drawing the Human Figure,* in which an art class demonstrates its method of drawing; *Painting a Mural,* a film that shows a high school girl painting a mural, "Little Black Sambo"; *Mother Goose,* with elementary school children dramatizing Mother Goose rhymes; and *Dances from the Nutcracker Suite* that pictures high school girls in interpretative dancing groups.

"Call of the Wilderness"

A new 7 reel 16mm SOUND film—one of the best ever made for elementary school use. A nature story, starring a beautiful, intelligent dog. Book this—give the youngsters a treat!

. . . Send for free catalog listing many other rental films.

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Illinois

Art teachers will be interested in two films developed at the Sullivan High School, Chicago. One, *Color,* an all-color film, starts with the basic principles of the color wheel and leads to correct color combinations. The other, *Lettering,* shows correct finger and hand manipulation in letter construction. Further information on the films may be secured from Mr. Julius J. Becker of the high school.

Michigan

Art Goes Everywhere is the stimulating title of an 800-foot film produced by students of the Roosevelt School, Wayne University Training School, Detroit. From the pre-school through the sixth grade, the students found art playing a part in all kinds of school activities. Mrs. Mabel Lange Smith, art instructor, was the advisor of the film group.

New Jersey

Miss Martha Noble of the East End School, North Plainfield, describes a public relations film made by her as follows: "*A Day in the East End School* begins with a picture of the children coming to school in the morning. It shows each grade engaged in some activity—the kindergarten children boarding a boat built of blocks; first grade groups reading, drawing, and playing games; second grade selling seeds in a store which they built; third grade dramatizing a Dutch play, painting a Dutch scene and arranging a sand table; fourth grade, library and safety council; fifth grade, hobby club . . . ; sixth grade, school newspaper. The movie closes with the children going home." (400 feet).

New York

A view of what a specialized vocational high school offers the student is presented in a 600-foot orientation film made at the Central Needle Trades High School, New York City.

The Mandl School for Medical Office Assistants, 62 West 45th Street, owns a 400-foot film showing the activities of medical office assistants and the teaching of clinical laboratory techniques. The film shows X-ray techniques, laboratory procedures, medical stenography, and nursing methods. David L. Bennett is principal of the school.

Ohio

One of the questions that school administrators are asked frequently is: "How are your teachers hired?"

This question is answered by a 250-foot film made by Richard W. Horn and O. E. Hill of the Galion Public Schools, Galion. They report: "The film merely presents in situation form how a teacher's services are procured—from the arising of the need to the notification of appointment."

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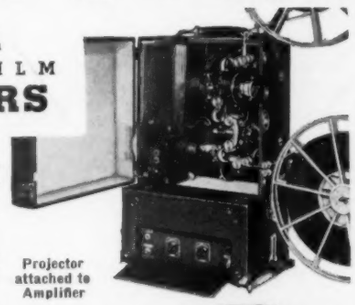

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The Holmes portable unit is most compact — projector in one case, speaker and amplifier in another. When running sound films, projector is locked into position on top of amplifier case, as illustrated. In showing silent pictures, not necessary to carry amplifier around. Speaker and amplifier may be used independently as portable address system.

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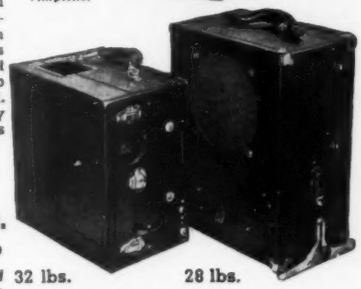

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Wisconsin

The following films are reported by H. M. Kuckuk, Rufus King High School, Milwaukee.

Defenders of Outdoor America (950 feet), made by the Wilson Junior High School, Appleton, shows boys at work on conservation projects. Another production of this school is *Handlebar Hazards*, a 700-foot bicycle safety film in color. It was produced cooperatively by the police department, the city council, and the board of education—R. L. Swanson, cameraman.

A school publicity film of 200 feet has been completed by the Kosciusko Junior High School, Milwaukee.

The King's Diary (1200) of the Rufus King High School, Milwaukee, gives the history of a new school, with the first football game, contest winners, activities of shops and classes.—H. M. Kuckuk, advisor.

A complete presentation of the work of the schools is the subject of *A Preparation for More Complete Living from Nursery School to the Sweet Girl Graduate*, 800 feet of film made by the South Girls Junior Tech, Milwaukee.

Oskosh State Teachers College has made a 250-foot film, *The Activities in the Primary Department of the Rose C. Swart Training School.* Miss Hulda A. Dilling, director of the Kindergarten-Primary Department, was the film sponsor; Phil Lyman, Cameraman.

A diary type of film is *The Seniors in Review* (500 feet), a production of the Richland Center High School designed to be shown as a part of a Class Night program.

Every step in puppet making and the use of the finished product may be found in *Puppetry*, (400) a film that has a national circulation. The film was made at the Jefferson School, Wauwatosa.—A. W. Krueger, principal. The activities of students in connection with the study of a unit on Arabia are shown in an 800-foot color release of the same school.

Seven films (approximately 400 feet each) have been completed by Harold R. Stamm of the West Allis High School. Each film documents some activity of Mr. Stamm's classes in physics, biology, or general science. Their titles are: *Telescope Making at the West Allis High School, Microscope Projects, The Electric Motor, Compass, the Signpost of the World, Hydrometry, Weights and Measures*, and *The Short-Wave Radio transmitter.*

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Booklet on School-Made Films

The Motion Picture Goes to School, a collection of "discussions on paper" on school film production and allied subjects, is available to educators.

The 46-page mimeographed booklet is issued by the Committee on Standards for Motion Pictures and Newspapers of the National Council of Teachers of English. Edited by Hardy R. Finch, head of English of Greenwich (Conn.) High School, it contains the following: "Producing Motion Pictures: A Problem in Communication," Edgar Dale; "The Problems of School Film Production," Lillian McNulty; "Prospectus on Hollywood Via Amateur Film Production," Eleanor D. Child; "The School Documentary Film as an English Activity," Donald Eldridge; "Enriching the Study of Literature by the Making of School Films," Maribel Richardson; "Teaching Library Techniques by Visualized Procedure," Alexander B. Lewis and Lavinia Caprio la Manna; "The Motion Picture or Photoplay Club: Its Function in the Secondary School," Constance McCullough; "Life's Too Short" (a scenario for a safety teaching film), Godfrey M. Elliott; "Bibliography on Movie Making."

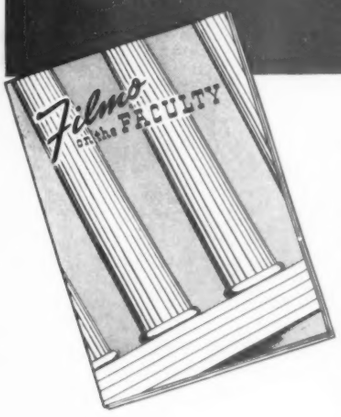
The booklet may be obtained from Hardy R. Finch, Greenwich High School, Greenwich, Conn. Requests should be accompanied by twenty cents to cover costs of mailing, etc.

SEND A REPORT OF YOUR SCHOOL MADE FILMS

Name of School .....
Address .....
Title and subject of film .....
.....
Date Completed .....
Length 200, 400, 500 or .....feet
Sixteen mm.? ..... Silent? .....
Color? ..... Made by .....
Brief summary of and unusual facts about the film .....
.....
.....
.....
Your name .....

Please send your reports to the editor of this department.

4 Ways to Improve YOUR Visual Instruction



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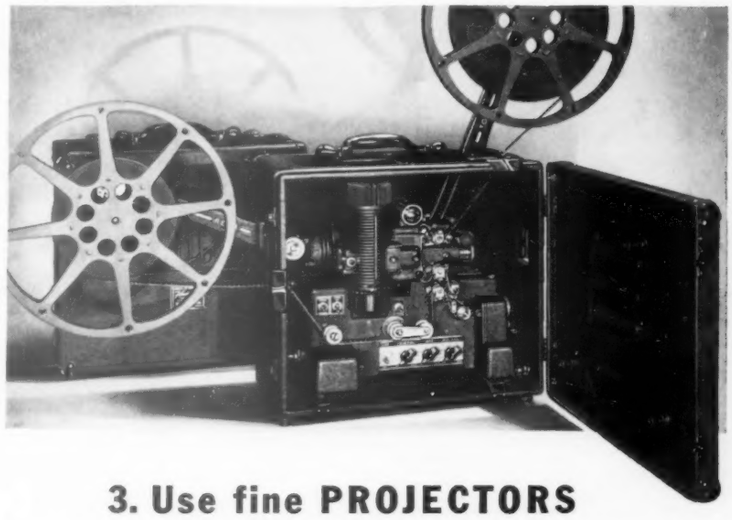
At the convention of the American Association of School Administrators in Atlantic City, February 22 to 27, visit the Bell & Howell booth, section L-2. There you'll see the largest and most complete exhibit of B&H visual education equipment ever presented, and the latest and best educational films in our Filmosound Library. You can examine and compare every Filmo silent and Filmosound Projector, including the powerful Filmoarc. And you can see all the accessories that so broaden the scope of school sound film projectors, including microphone, disk recorder and record player, transcription player, phonograph turntable, and others. This instructive exhibit will be attended by specialists who know not only films and equipment but also the answers to your problems of application.



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CIRCLE 7-7100

News and

Southern California Spring Conference

Present and future trends in the field of visual-audio education will be realistically demonstrated at the coming Southern California Spring Conference of the Visual-Audio Section of the C. T. A. to be held in San Diego, April 4-6. City and county departments will act as co-hosts with headquarters in the Hall of Education, ideally located in the heart of the city's cultural and recreational center in beautiful Balboa Park.

Enjoyable social and recreational special events are being arranged in connection with the program. Among special attractions is a guided tour, Sunday, to the Observatory on Palomar Mountain, where the world's largest telescope is housed. Another planned trip will be a personally conducted Harbor Excursion, which will afford an opportunity to see anchored in port the latest type navy ships. Visitors will be given an opportunity to witness actual training of students in such types of work as sheet metal, motor assembling, boat building, and reconstruction for mine sweepers, tool making, parachute manufacture, etc. This school was recently launched under the San Diego City Schools National Defense Training program to meet the urgent demand of local aviation plants for more trained men. Regular class work of the Vocational High School, including both trade and business courses will be open to the visitors attending the conference. Observation of these vocational schools will be planned so as to show methods and materials now available to visualize such instructional areas.

Exhibits will include a photographic salon featuring the work of teacher and pupil photo-activity groups, displays of student's work illustrating local curriculum centers of interest and areas of study, and commercial equipment exhibits.

Attuned to the spirit of the times, the theme of the illustrated forums and panels scheduled for the conference will be, "Visualizing Today's Defense of Life's Real Values."

(MARIAN EVANS)

Visual Education in Tennessee

The "Audio-Visual News," published by the University of Tennessee Division of University Extension, reports that January 1, 1941, marked the first birthday of the new educational motion picture film service inaugurated last year by the University. But despite its short life, the library now boasts the acquisition of nearly three hundred and fifty film subjects, and is filling a real need in Tennessee. Already almost a hundred and fifty accounts are listed in the books of the Division.

Among the new films offered is a one reel sound subject produced by the University, entitled *The University of Tennessee at Work,* which presents the activities, work, and scope of the institution. It is available free to film users in the state.

Another item of interest reported by the bulletin is that for the first time in the history of the Tennessee

Notes

Education Association, its program will include a sectional meeting on Audio-Visual Education, April 11. Mr. W. Gayle Starnes, University of Kentucky Extension Division, will be guest speaker.

Preliminary plans are being made to introduce a Visual Aids Caravan in the state after school starts in the fall. The Caravan will be a traveling conference, holding meetings at seven centers for the discussion and demonstration of visual aids.

Visual Aids in Mathematics Demonstrated

The Visual Instruction Section of the New York Society for the Experimental Study of Education devoted the evening of January 10 to a discussion and demonstration of "Visual Aids in Mathematics." Considerable interest was shown in the series of 16mm silent films for teaching mathematics, produced by Dominick Montelbano, teacher in Junior High School 109, Brooklyn. Mr. Montelbano also outlined the experimental evaluation which is now being conducted to determine the effectiveness of these films in the teaching of 7A Mathematics when compared with the traditional method that uses the textbook as a basis. The series of 17 films were made to accompany specifically the course of study in the New York City junior high schools. The project is divided into four units: Home Unit, Savings Banks, Geometry, and Travel Units.

Pupil-made lantern slides correlating with the 7A Course of Study in Mathematics were also demonstrated, by Thelma Jackson, teacher in Junior High School 113, Bronx. Mrs. Esther L. Berg acted as chairman of the meeting.

Museum Free Film Programs

The Art Appreciation Film Program for 1940-41 at the Philadelphia Museum of Art has been prepared on an impressive scale by the Division of Education. Beginning November 16th, this series of free motion pictures is given weekly on Saturday and Sunday afternoons, concluding May 25. The seventy-nine films booked for the season cover such subjects as Architecture, Sculpture, Painting, Pottery, Weaving, Arts and Crafts, Puppetry, The Graphic Arts, Abstractions, and the Animated Cartoon.

Visual Aids in the CCC

Howard W. Oxley, Director of CCC Camp Education, recently reported that 1100 of the 1489 CCC camps have motion picture projectors, 1108 filmstrip projectors, and 282 are supplied with opaque propectors. A few have lantern-slide equipment. In one typical school month 7402 educational films were shown, with a total attendance of 575,028 for the month. Maps, charts, diagrams and models are also used for exhibit purposes in many camps.

In each corps area, films and filmstrips are distributed

(*Concluded on page 87*)

25 additional Erpi Films released in 1940

You are invited to see these and other Erpi subjects of your own selection at our

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February 22-27

166 subjects to choose from!

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Early Settlers of New England, A Planter of Colonial Virginia, The Policeman, The Passenger Train, Chemistry and a Changing World, Safety in the Home, French-Canadian Children, Children of Switzerland, Children of Japan, Children of China, People of Western China, People of Hawaii, Argentina (People of Buenos Aires), Brazil (People of the Plantations), Chile (People of the Country Estates), Peru (People of the Mountains).

3 NEW FILMS ON HUMAN BIOLOGY:

Control of Body Temperature, The Work of the Kidneys, Tuberculosis (Its Diagnosis, Treatment and Control).

3 NEW FILMS ON ANIMAL LIFE:

The Honey Bee, The Snapping Turtle, Elephants.

2 NEW FILMS ON ART:

The Modern Lithographer, Furniture Craftsmen.

1 NEW FILM ON PLANT LIFE:

Gardening.

Erpi Classroom Films Inc.

ERPI CLASSROOM FILMS INC. E.S. 2-41
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Gentlemen: Please send me additional descriptive material on your films including the Integration Chart which indicates the correlation of each film with different subject matter courses.

Name _____

Position _____

Address _____

NEW FILMS OF THE MONTH
As They Look to A Teacher Committee

Conducted by DON WHITE
In Charge of Audio-Visual Extension Service
Division of General Extension,
University System of Georgia, Atlanta

The Snapping Turtle (Erpi) 11 minutes, 16mm sound, sale price $50.00. Teacher's guide to be furnished.

Unusual photography reveals the life-story of an interesting reptile, seen in its natural habitat. As the film begins, it is springtime; some of the inhabitants of a pond and its shore are pictured. Then, in detailed closeups, the snapping turtle is seen swimming, going to the surface for air, and catching food. Mother snapping turtle crawls out of the pond; locating a suitable spot, she begins laying her eggs. This process is shown in some detail. Afterwards, she starts back to the pond. A skunk discovers the nest and begins to eat an egg, but a dog frightens him away. After three months, one of the eggs is seen hatching. Others follow. Several of the tiny turtles, yolk sacs still attached, start out to find the pond. In the water, one catches and eats a dragonfly nymph. The mother passes close by her young, and we hear that she has no further interest in them except as possible appetizers. A crayfish escapes her by losing a claw. As winter comes, the turtles dig a burrow at the bottom of the pond and hibernate through the months when ice covers the surface; but with the coming of spring again, they awaken to begin another year of life.

COMMITTEE OPINION—An excellent film for a wide range of applications; should be especially valuable in biology, zoology, and nature study classes, at all grade levels. The film is well organized; photography and sound are good.

A New World Through Chemistry (DuPont) 2 reels, 16mm Cinecolor sound, "Free."

This color film tells of the activities of the du Pont Company in bringing to our everyday life new and useful products made possible through chemical research. The film opens with views of laboratory apparatus as the narrator states that the chemical laboratory is in the vanguard of modern progress. First, a realization of chemists' dreams is shown in Neoprene, a synthetic rubber now in commercial manufacture. The qualities which make it superior to rubber for certain uses are shown in tests. A housewife demonstrates several kitchen conveniences manufactured from Neoprene. Next, liquid-repellent fabrics are demonstrated in a dramatized skit. Fire-retarding agents, useful for women's dresses, are demonstrated.

To make rayon, cellulose sheets are shredded, liquefied and forced through spinnerets, wound on spools, dyed, and woven. A West Virginia plant which makes Nylon is next shown, with a brief explanation of raw materials and some of the methods. In a hosiery mill, the Nylon thread is knitted into women's stockings. Other uses of this product are shown in the making of brushes and fishing line. The Lucite plastic, valuable especially because it will transmit light over any desired course without lateral leakage, is demonstrated. We also see furniture and other household articles made of this and other plastics. The film ends with scenes of girl models in their synthetic dress and using synthetic furniture, as the commentator emphasizes the value of chemistry to our life. Produced by Scientific Films, Inc. Distributed also by YMCA Motion Picture Bureau, 347 Madison Avenue, New York City.

COMMITTEE OPINION—An excellent film for use in chemistry and physics classes; should have some value for social science classes, and should be very effective in general showings, at the junior high level and above. Of limited value also in elementary grades. The film makes effective use of color; photography and sound are good, although color rendition is not completely up to standard. A good variety of materials and uses are shown. The one weak point noticed is the fact that in a few scenes models appear clothed in undergarments and bathing suits; some schools may consider these scenes unsuitable for their showings. For that reason, it is recommended that the film be screened by faculty members before being exhibited to students.

Argentina (Erpi) 11 minutes, 16mm sound, sale price $50.00. Teacher's guide to be furnished.

Represents life in Argentina by showing the daily lives of people in Buenos Aires and by explaining the city's dependence upon the Pampas for export products. The film opens in Buenos Aires as Roberto Campas, an employee in a meat packing plant, goes to work by subway. A wealthy broker, Senor Rodriguez, goes to his office by automobile. In the packing plant, some of the processes in preparing Argentine beef for market are shown. Senor Campas returns home for lunch. In his office, Senor Rodriguez dictates an order for a new automobile. At the docks, ships are being loaded and unloaded with the exports and imports vital to the city's life.

But making both possible, there is behind the cities another Argentina—the land of the vast Pampas, used chiefly for agriculture and grazing. Typical agricultural activities on the Pampas are shown. Great herds of cattle, with their gauchos, form a picturesque sequence, as do the sheep which roam the plains. Back in the city, Roberto Campas and his family are seen visiting the zoo, and the film closes with views of their home life in the evening.

COMMITTEE OPINION—An excellent film for classes in the social studies, particularly geography, from the junior high through adult levels; should have considerable value also in elementary grades. The film is well organized and includes a variety of material. It should contribute especially to a realization of kinship with the people of Argentina. Photography and sound are good.

Throwing on the Wheel (Minnesota) 1 reel, 16mm silent, sale price $28, rental $1.25.

Epic Hellman, graduate of the University of Copenhagen, demonstrates the techniques of forming a vase on the potter's wheel. First, a lump of clay is placed on the wheel. In detail, but without explanatory titles, the process of centering, shaping the bottom, lifting the sides, final shaping and finishing the vase are shown. With extreme care the vase is lifted from the wheel, air-dried, fired, dipped in glazing slip, and fired again. In conclusion the completed vase is shown.

COMMITTEE OPINION—A fair film for use in teaching the techniques of pottery making, and for art appreciation. Some committee members criticized the film's entire omission of explanatory subtitles on grounds of lack of clarity and completeness; others thought this a good feature because, among other things, it makes possible use of the film at any grade level, and because they felt no explanatory titles were needed. Photography is good throughout.

(Concluded on page 86)

This monthly page of reviews is conducted for the benefit of educational film producers and users alike. The comments of both are cordially invited.

Producers wishing to have their new films reviewed on this page should write Mr. Don White at 223 Walton Street, N. W., Atlanta, Georgia, giving details as to length, content, and basis of availability of the films. They will be informed of the first open screening date when the Teacher-Committee can view the films. The only cost to producers for the service is the cost of transporting the prints to and from Atlanta, which must be borne by the producers.

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- Pictured in them too, is England's answer: how it has set about the task of preserving its constitutional form of government as well as itself; and successfully turned democracy into a weapon efficient enough to withstand the challenge of totalitarianism.
- But perhaps most important of all—quite apart from their authentic importance and meaning to us as the world's only other great democracy—these films have a very real and timely educational value. The detailed visualizations of the vocational training, industrial and social techniques the British are evolving provide answers to many of the problems which our present defense program is raising.
- Be first in your community to show these films by acting now.

These 25 films provide the first authentic moving picture record of how British Democracy is meeting the challenge of total war.

BRITAIN AT WAR

1. **Britain on Guard (1 reel: 7 mins.)**
   A democratic people mobilized against invasion. Commentary by J. B. Priestly. G. P. O. Prod.
2. **Channel Incident (1 reel: 8 mins.)**
   A typical small craft in Dunkirk evacuation.
3. **Coastal Defense (1 reel: 11 mins.)**
   Preparations against attack. Attacks at sea.
4. **Into the Blue (1 reel: 11 mins.)**
   Training pilots, gunners and observers for R.A.F.
5. **Raising Sailors (1 reel: 11 mins.)**
   Training the Royal Navy. Pathe Prod.
6. **Raising Soldiers (1 reel: 10 mins.)**
   Training the Army. Movietone Prod.
7. **Sea Fort (1 reel: 7 mins.)**
   A floating sea fort, off Britain's coast.
8. **War and Order (1 reel: 10 mins.)**
   Wartime duties and training of the Police Force and Home Guard. G. P. O. Prod.

PRODUCTION FOR DEFENSE

9. **Job to Be Done (1 reel: 10 mins.)**
   Use of civilian man-power in wartime.
10. **Airscrew (2 reels: 22 mins.)**
    Manufacture of all-metal airplane propellers: "variable pitch" explained.
11. **Behind the Guns (2 reels: 19 mins.)**
    Vivid film of civilians at work in factories and shipyards. Illustrates industrial processes.
12. **Yesterday's Over Your Shoulder (1 reel: 8 mins.)**
    How man without experience is trained to be an engineer. Valuable for Vocational Guidance.

INTERNATIONAL RELATIONS

13. **Atlantic (3 reels: 27 mins.)**
    An all-diagram film for teaching purposes, giving an overview of the Western World to 1940.
14. **Men of Africa (2 reels: 19 mins.)**
    British colonial administration in East Africa with particular reference to medical services, education and native responsibilities.

LIFE OF THE PEOPLE

15. **The Big City of London (1 reel)**
    The best short film to date on London. Should be in the permanent collection of every school.
16. **Village School (1 reel: 10 mins.)**
    How children, including 30 evacuees, are educated in wartime. A good example of method. Should be shown by every teachers' college.
17. **Sailors Without Uniform (1 reel)**
    Fishing for food and sweeping for mines.
18. **Spring Offensive (2 reels: 20 mins.)**
    Excellent example of the democratic way. Farmers carry out a campaign to cultivate more land. A London boy evacuated to the country is shown doing his part.
19. **Britain's Youth (1 reel: 11 mins.)**
    British sports; importance of physical fitness.
20. **Religion and the People (2 reels: 15 mins.)**
    Protestant, Catholic and Jewish welfare work.
21. **S. O. S. (1 reel: 12 mins.)**
    The story of lifeboat crews in Cornwall.

SOCIAL WELFARE

22. **Mother and Child (1 reel: 11 mins.)**
    Maternity and child welfare services in Britain.
23. **The New Britain (1 reel: 12 mins.)**
    Some achievements of British democracy 1918-1939—health, education and housing.
24. **Welfare of the Workers (1 reel)**
    Enforcing high standards in working conditions.
25. **White Battle Front (1 reel: 10 mins.)**
    Medical services for fighters and civilians.

16mm sound prints sell for $15.00 per reel; rent for $1.50 per reel. 35mm sound prints rent for $2.50 per reel.

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Western Illinois State Teachers College

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SECOND PUNIC WAR
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easily and quickly, by using GLASSIVE, an abrasive which makes ground glass slides from plain cover glass for only a fraction of a cent each! 50c package.
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TEACHING AIDS SERVICE
JAMAICA PLAIN MASSACHUSETTS

People of Western China (Erpi) 11 minutes, 16mm sound, sale price $50.00. Teacher's guide to be furnished.

Excellent photography reveals the influence on Modern China of the habits and customs of past centuries. The film opens with an unanswered question as to the age of Western China's civilization. It is emphasized that the people have been rooted to the soil for centuries, regardless of the rise and fall of dynasties. On the farm, irrigation is an ancient art; 2000 years ago, a great engineer, Lee Ping, designed the valley's irrigation system, which is still in use. Native mills, turned by the water, grind the grain from the farms. Bamboo, a versatile material, is put to many uses. From the earth comes clay for the potter who shapes it on his foot-powered wheel. Silversmiths ply their trade. Silk is wound from cocoons and woven on a hand loom.

Finally, the film depicts the contrast of modern technological progress in its impact against the old civilization by showing hydroelectric developments which bring lighting and communication to the valley; motor buses now used for transportation; new medical methods, in contrast to the traditional Chinese medical beliefs; and modern airplanes which span the valley. Upon the point that the old Chinese life and heritage endures in spite of the people's acceptance of modern machines, the film concludes.

COMMITTEE OPINION—A good film for use in geography and the social studies. Should have some value in elementary classes, with major effectiveness at the junior high level and above. Organization is satisfactory; photography and sound are excellent.

Four New Apple Dishes (Canadian Gov't.) 12 minutes, 16mm Kodachrome sound, "Free." Apply to producer for names and addresses of American distributors.

A color film showing how Canadian apples may be made an attractive part of the menu. The first part of the film shows the various kinds and grades of Canadian apples, and explains the best uses for each, suggesting how apples should be purchased. A woman now replaces the previous man narrator and tells, in detail, the steps in preparing four dishes: apple salad, apple upside-down cake, glazed baked apples, and apple ice cream. New cooking techniques are incidentally demonstrated at one or two points, and the film's explanation of all details of preparation is appropriately slow and careful.

COMMITTEE OPINION—An excellent film for home economics, cooking and diet classes from the junior high through adult levels. Should be especially suitable for P.-T.A. showings and the like. The film makes good use of color; photography and arrangement are good. Sound is acceptable.

Producers named:

Canadian Gov't. Canadian Government Motion Picture Bureau, John and Sussex Streets, Ottawa, Ontario, Dominion of Canada.

DuPont. Motion Picture Bureau, E. I. du Pont de Nemours and Company, Wilmington, Delaware.

Erpi. Erpi Classroom Films, Inc., 35-11 Thirty-Fifth Ave., Long Island City, N. Y.

Minnesota. University of Minnesota, Visual Education Service, Minneapolis, Minnesota.

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WORLD SITUATION

Use these 16mm. Sound Films

Three highly accurate teaching films covering the expansion and entrance of the United States in world affairs. Bring to your students portrayals of the growth of our cradle of democracy, utilizing all the intense power of the motion picture to explain in authentic scenes, charts, animated maps and clarifying narrative.

Available in 16mm. or 35mm. sound

1. The Causes and Immediate Effects of the First World War
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3. Territorial Possessions of the United States (from 1850 through the purchase of Virgin Islands)

These films are for rent or sale. Write for full details.

INTERNATIONAL GEOGRAPHIC PICTURES
52 VANDERBILT AVE. NEW YORK

News and Notes

(Concluded from page 83)

to camps by the corps area film center or through district film centers, on a definite booking schedule. Through the service of corps area film libraries it has been possible to correlate groups of films and film strips with specific classes and activities, and to prepare study guides for the use of instructors. A survey conducted by the United States Office of Education indicated that 199 films had been used effectively in 31 different subject-matter fields.

Two publications will be available soon from the CCC, namely "Catalog of 16mm Educational Films Used Successfully in CCC Camp Courses," and "Use of Films, Film Strips and Slides."

New Film Courses

Two new courses in Audio-Visual Education, sponsored by the Bronx Boro Wide Association of Teachers, New York, are given this semester by Joseph V. Sullivan, Chairman of the Classroom Films Committee, Department of Secondary Education of the N.E.A. "Types of the Photoplay—The Documentary Film" is aimed to enlighten teachers about the potent power and curriculum implications of this medium of instruction. Films based on a definite topic are shown at each session to form the basis of the lecture and discussion. The other course, "Motion Pictures in the Industrial Arts," is designed for teachers in that field, to acquaint them with suitable films and proper teaching techniques for using such films in the classroom.

"Ten Best" 1940 Theatrical Films

The "Ten Best" films released in 1940 have been selected by 546 American critics and reviewers from a list of 440 eligible features compiled by *The Film Daily*, which conducts this poll annually. *Rebecca*, a Selznick production distributed by United Artists, was first with 391 votes. Others were respectively: *The Grapes of Wrath* (Twentieth Century-Fox); *Ninotchka* (Metro-Goldwyn-Mayer); *Foreign Correspondent* (United Artists); *All This, and Heaven Too* (Warner Bros.); *Abe Lincoln in Illinois* (RKO Radio); *Boom Town* (MGM); *Northwest Passage* (MGM); *Our Town* (United Artists); *The Mortal Storm* (MGM).

Another* GUTLOHN *First!

NORTH SEA PATROL

The first drama based on the war with authentic scenes of the British Navy in action. Cast includes Geoffrey Toone and Judy Kelly.

Other Recent 16 MM. Sound Film

FEATURE RELEASES

THE OUTSIDER
Inspiring drama of faith and love. Acclaimed by critics and film committees throughout the nation. Features Mary Maguire and George Sanders.

★

HOUSEMASTER
Comedy-drama of English school life. Starring Otto Kruger, Phillips Holmes and Diana Churchill.

★

SPIES OF THE AIR
A colorful story of the British Secret Service combatting airplane espionage. Features Basil Radford, Barry Barnes, Joan Marion.

★

BLACK LIMELIGHT
Mystery drama with Raymond Massey.

★

WARNING

★

MYSTERY OF ROOM 13

★

JUST LIKE A WOMAN

★

DEAD MEN TELL NO TALES

★

THE TERROR

★

ONE NIGHT IN PARIS

★

LITTLE MISS MOLLY

★

BLACK EYES

★

HIDDEN MENACE

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Current Film News

■ NON-THEATRICAL PICTURES CORP., 165 West 46th Street, New York City, have acquired a series of short British documentary films on England, for sale in 16mm sound.

COLLEGE FILM CENTER, 59 E. Van Buren Street, Chicago, offers these same subjects for both sale and rental. They can also be rented from many film libraries throughout the country.

Britain at War, the title of one group into which the films are classified, includes 9 subjects: *Britain on Guard*—sections of the population mobilized for defense; *Channel Incident*—dramatic re-enactment of the Dunkirk evacuation; *Coastal Defense*—preparing against invasion; *Food Convoy*—protection of Britain's overseas food supply; *Into the Blue*—training of men in the R.A.F.; *Raising Sailors*—gun drill, signalling, recreation in the Royal Navy; *Raising Soldiers*—army training and equipment; *Sea Fort*—inside views of a floating sea fort off the coast of Britain; *War and Order*—police duties under normal and emergency conditions.

Men and Armaments has 4 subjects: *A Job to be Done*—organization of civilians in war time; *Air Screw*—detailed technique of propellor construction; *Behind the Guns*—industrial processes in Britain's armament factories; *Yesterday's Over Your Shoulder* — technical training of civilians portrayed in dramatic sketch.

World Factors—3 films: *Atlantic*—animated film explaining history of western world, racial problems, colonial and imperial expansion in relation to countries bordering Atlantic Ocean; *Fighters of the Veldt*—revue of South African army, navy and air force; *Men of Africa*—British colonial administration in East Africa.

Social Services—5 films: *The New Britain*—achievements in social welfare during the last two decades; *The Big City*—transportation in London in relation to work and recreation; *Mother and Child*—child welfare services adapted to war time needs; *Welfare of Workers*—working standards maintained under war conditions; *White Battle Front*—medical services available for fighting forces and civilians.

Life of the People—7 films: *Britain's Youth*—importance of maintaining physical fitness in war time; *Religion and the People*—contribution of Protestant, Catholic and Jewish population to social and democratic life; *S O S*—details of life boat crew rescue work in typical coastal village; *Sailors without Uniforms*—hazardous work of Britain's fishermen in war time; *Spring Offensive*—organization of campaign to increase food resources; *The Answer*—civilian population rise to meet menace of invasion; *Village School*—education in war time, care of evacuees from metropolitan centers.

■ CASTLE FILMS, INC., 30 Rockefeller Plaza, New York City, have completed a new motion picture on African jungle life, under the title:

Native Africa—16mm and 8mm, sound and silent—an intimate filming of tribal customs and primitive existence in the kraals, and an unstaged picturization of wild life in its natural habitat.

Rounding the Cape of Good Hope, a brief visit is made in the great modern city of Capetown, from which quick transition is made to the rolling plains of the interior, and finally the jungle itself. Here the continual danger in which natives live is reflected by the thornbush walls around every village as protection against night-prowling killers. The

Scenes from the Castle film, "Native Africa."

humped African cattle are guarded jealously, and the size of a man's herd establishes his position in the tribe as well as the number of wives he may have. Markings on the face and body designate the wearer's relationship to family or sect. Children squat on the ground of the village street while the women procure milk from the cow for immediate consumption on the spot. Monkeys play with and plague the youngsters. A father teaches his young how to build a fire by the same method that now is taught all Scouts.

In contrast is one of the rarest of movie shots ever to come from Africa. It is a sequence in which a father lion teaches his cub something about the rough ways of the jungle. The ferocious African elephant is shown in its natural settings, and then trained to do the hard work of the jungle. Baby lion cubs guard the den in the absence of their parents. There are herds of zebra, giraffes and other denizens of the jungle. A fine close-up study shows a magnificent specimen of lion at the water-hole.

Native tribal dances are witnessed, as is the novel way in which native girls fish in the rushing rapids of the Zambesi. The movie concludes with beautiful shots of the great Victoria Falls.

■ WALTER O. GUTLOHN, INC., 35 West 45th Street, New York City, distributors of 16 mm. sound film, announce the release of:

On the Road to Acapulco—2 reels—color film that portrays the famed beauty of Old Mexico with a background of appropriate Mexican music.

A two year Payment Plan has been inaugurated by Gutlohn. Under this arrangement educational institutions maintaining film libraries may secure educational and instructional films from this organization payable over a two year period in monthly installments. A minimum purchase of 10 subjects is required. With a vast number of 16 mm. sound and silent subjects in their library, Walter O. Gutlohn, Inc. makes available much important material to schools, and educational groups operating with limited budgets. Prints for screening may be had prior to purchase. Complete catalog will be sent upon request.

■ FILMS INCORPORATED, 330 West 42nd Street, New York City, makes the following announcement:

Conquest of the Air, the documentary film, which was produced last year by RKO-Pathe-Films Incorporated, is now available to Cooperative School Film Libraries and University Extension Libraries on a lease basis. It is forty-five minutes in length and is 16mm sound. The film traces the history of aviation, telling in pictures, animated diagrams and clarifying dialogue how man flies and how he learns to fly. This history is brought right up to date with scenes of the latest type aircraft and an explanation of the United States Army air training program.

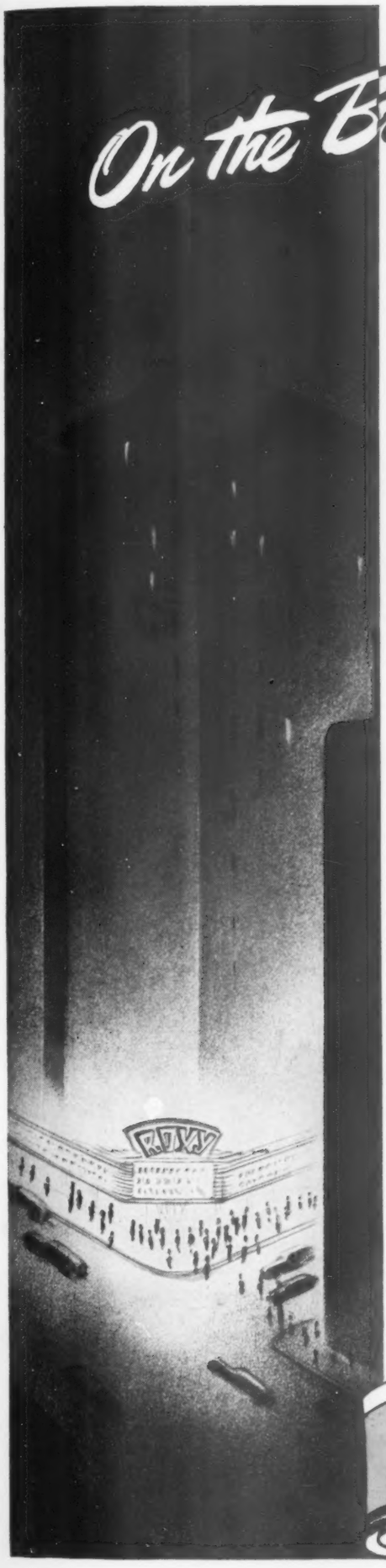
Directors of School Film Libraries are invited to write to Films Incorporated, for a screening print and full details.

■ GARRISON FILMS, INC., 1600 Broadway, New York City, have added four more one-reel films to their series of Handicraft Teaching Films, rounding out the ten subjects originally scheduled. The first seven have been announced previously in this department. Titles of the three new films are:

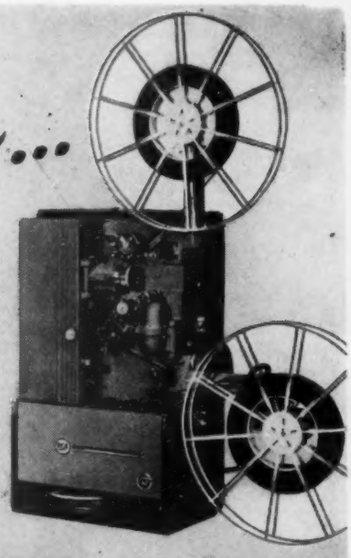
Casting with Rubber Molds; Simple Block Printing; Clay Pottery. The films were directed by Arthur Browning, and produced by Garrison in cooperation with the Universal School of Handicrafts.

Garrison also announces that the entire series, now available in silent form only, will be ready with sound commentary March 10th.

(*Concluded on page* 90)



On the Broadways of America...



RCA Motion Picture Sound Equipment is the Choice of over 6000 Theatres

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RCA 16 mm. SOUND FILM PROJECTOR

Finer, clearer sound... More even light distribution on screen... Greater operating simplicity. It's years ahead...16 superior features ... yet is priced with the lowest!

GIVE your pictures new sparkle ... your sound new life—with the sensational RCA 16 mm. Sound Film Projector.

The finer performance and greater operating simplicity of this instrument are the result of RCA engineering. Designed by the men who build RCA equipment used in Hollywood studios and in thousands of theatres, this projector has oversize reflector, condenser and objective lens which provide more even distribution of light on the screen. Sound is full, clear and more brilliant—at either high or low volume —because of film take-up equalizer and superb electrodynamic speaker. To greatly simplify threading, this projector has threading line cast on projection block. All size reels may be quickly rewound by motor.

Low in cost, easy to carry, this equipment is just what you've been looking for to make every lesson live!

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on New York's Broadway has RCA Motion Picture Sound Equipment. Over 6000 theatres on the other Broadways of America are similarly equipped to provide their audiences with the finest performance!

Modern schools *stay* modern with RCA Tubes in their sound equipment. Trademark "RCA Victor" Reg. U. S. Pat. Off. by RCA Mfg. Co., Inc. In Canada, RCA Victor Co., Ltd., Montreal

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RCA Victor

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Educational Dept. (E-2)
RCA Manufacturing Co., Inc.
Camden, New Jersey

Send complete information regarding RCA 16 mm. Sound Film Projector.

Name.....

School.....

Address.....

City.....State.....

■ Post Pictures Corporation, 723 Seventh Avenue, New York City, reports further additions to its series of 16 mm sound films on bird and animal life, also sports: These are listed and described in 1941 Catalog Supplement A. All are one reel.

Song Birds of the Northwoods—the songs and cries of American Birds.

Sky Fishing—in the high Rockies of Jasper National Park, where fly fishing is sky fishing.

Animal Cunning—Unusual shots of a wide variety of animals showing their instinctive cunning and shrewdness.

The Seeing Eye—the training of faithful shepherd dogs for service to the blind.

Grey Owl's Little Brother—appealing story of the friendship between an Indian woodsman and the shyest of wild creatures—a beaver.

Ornamental Swimming — showing girls experts in figure and group unison swimming.

Also newly announced by Post Pictures is a series of short musical comedies and novelties. For complete list send for 1941 Catalog Supplement B.

■ Nu-Art Films, Inc., 145 West 45th Street, New York City, announce the release in 16mm sound, of the comedy feature:

The Gladiator — starring Joe E. Brown, described as a "laugh riot." The unsuspecting victim of a "scientific" serum innoculation, Joe becomes a super strong man, amazing everyone with his prowess. He challenges Man Mountain Dean to a wrestling match, in the midst of which the serum wears off.

■ Bald Eagle Film Productions, Inc., 104 Howe Street, New Haven, Connecticut, present two new one-reel films in 16mm sound:

Geometry in Action—the first of the series "Geometry Brought to Life," produced in collaboration with David Reichgott and Lee Spiller, authors of "Today's Geometry." The film discusses the questions: Why should I take geometry? How will geometry affect me? It broadens the horizon of the uses to which geometry is applied, and gives students a new conception of its place in everyday life.

The Second Punic War—produced in cooperation with Alfred E. Porter, Head of the Latin Department, New Haven High School. The film opens in Rome with the return of Scipio from Spain, and shows the events leading up to the Battle of Zama. Thousands of warriors, clad in authentic replicas of Roman and Carthaginian armor, go through the same military tactics that enabled Scipio to defeat the invincible Hannibal. This reel is available with Latin commentary for Latin classes.

■ Theatre-on-Film, Inc., producers and distributors of the filmed-stage play, *Journey to Jerusalem*, have moved their New York office from 729 Seventh avenue to larger quarters at 1619 Broadway, New York City.

■ Eastman Kodak Company, Teaching Films Division, Rochester, New York, has ready for sale a timely new sound film on shop practice, which should be welcomed by those concerned with the training of mechanics for national defense.

Elementary Operations on the Engine Lathe—1 reel, 16mm sound—demonstrates, step by step, with full explanations in sound, the action involved in every significant procedure. It shows the correct methods for exact alignment of the lathe; facing, straight turning and squaring a shoulder; following mechanical drawing; the principal cutting tools; use of micrometers in relation to the graduated dials.

■ Lewis Film Service, 105 East First Street, Wichita, Kansas, offers for rental:

Bicycling with Complete Safety, 1 reel, 16mm sound. Its subject matter makes the film especially appropriate for school use, as it shows what the children themselves can do to make bicycle riding safer.

■ Douglas D. Rothacker, 729 Seventh Avenue, New York City, offers four interesting and instructive films on the Nickel Industry, a metal which plays a vital part in present production for defense. The films, available in 16 mm sound, cover in detail the processes of mining, smelting and refining of Nickel. Titles are: *Nickel Mining*, 2 reels, *Nickel Smelting*, 2 reels, *Nickel Refining*, 1 reel, and *Nickel Highlights*, 4 reels. They are valuable for use by High Schools, Technical Vocational and Trade Schools, and are available on a free loan basis.

■ Bertram Willoughby, President of Ideal Pictures Corporation, 28 East Eighth Street, Chicago, Illinois, recently returned from a motion picture expedition into Guatemala. He expects soon to release a three-reel color film on that country. The production has tentatively been titled *Land of Enchantment*.

In keeping with its policy of constantly adding new material to its huge film library, as such material becomes available, Ideal Pictures has found it necessary, since publishing its large Fall catalog, to add several Supplementary catalogs listing hundreds of additional films—educational and entertainment subjects, features and shorts. The latest and best in Foreign films and in Religious subjects are also offered by Ideal.

■ Y. M. C. A. Motion Picture Bureau, 347 Madison Avenue, New York City, has been appointed official distributor of many of the Teaching Film Custodians, Inc., film subjects for short-term rentals. All are in 16mm sound and classified into three groups:

Citizenship and Character Education—including *Crime Does Not Pay Series; Servant of the People*, (the making of the American Constitution), *The Perfect Tribute* (story of Lincoln's Gettysburg address), and others.

Physical Education and Recreation—9 subjects on swimming, badminton, golf, gymnastics, skiing, baseball, tennis, table tennis and miscellaneous sports.

General Science and Health—9 subjects on achievements in medical science, including the work of Pasteur, Dr. Carver, Dr. Jenner, Dr. Semmelweiss, Alfred Nobel, and others.

The Bureau has also acquired many films from Erpi Classroom Films, and Vocational Guidance Films, Inc., making up a series of 15 reels on "Vocational Guidance."

■ The Manse Library, 1521 Dana Avenue, Cincinnati, Ohio, has just added to its rental library, the feature release of Commonwealth Pictures Corporation:

Call of the Wild, 7 reels, 16mm sound, an adventure story set in the primitive Northwest, with a fine, intelligent dog as its star. The distributors recommend it as a family film, one of wide appeal to nature lovers.

FILM REVIEW

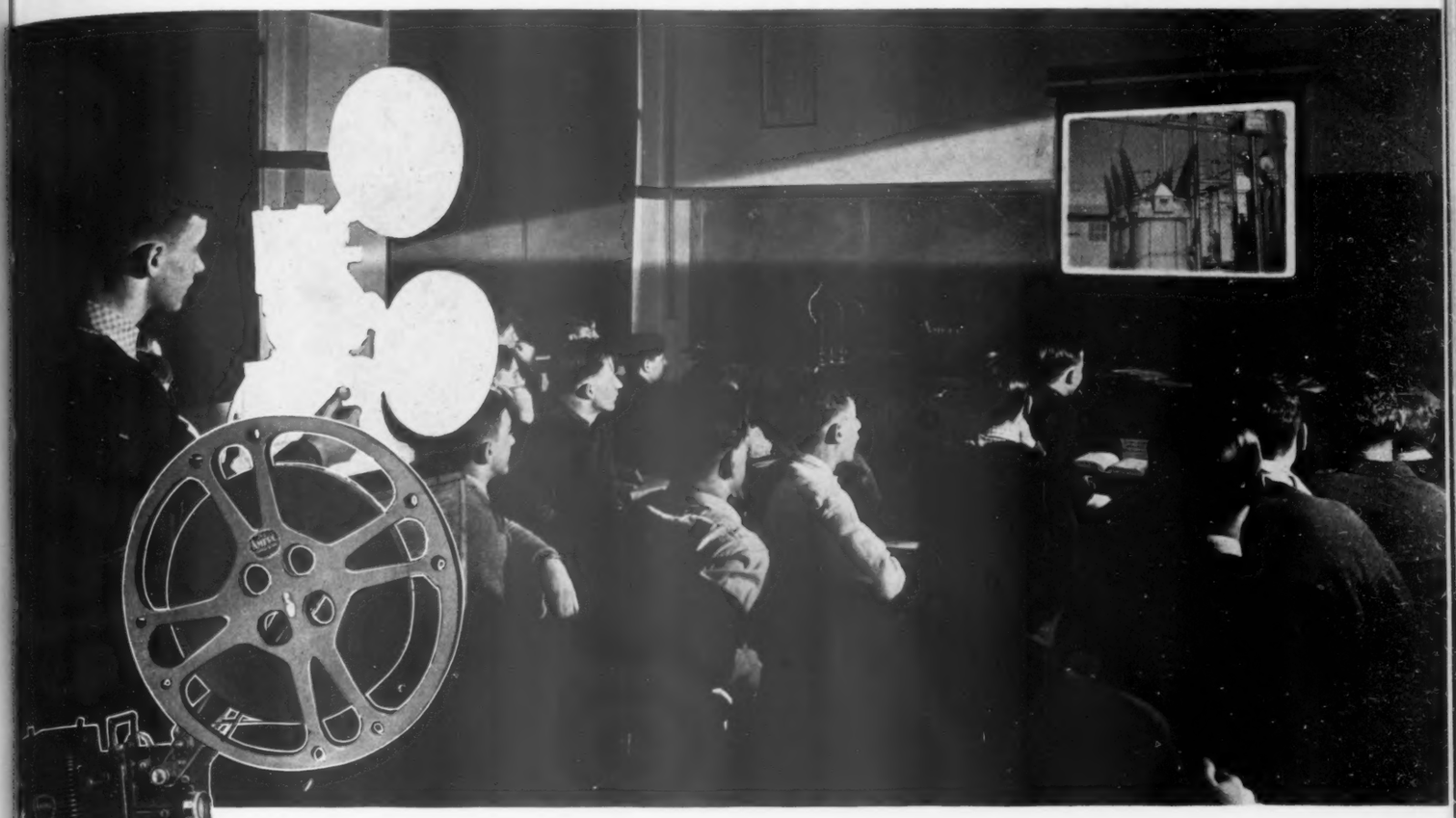
The Last Stronghold—4 reels, 16mm sound. (Films, Incorporated).

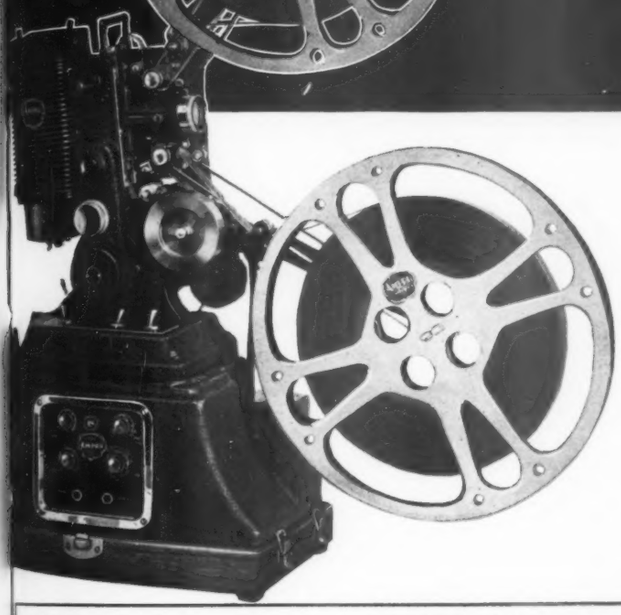
A documentary film presenting, in closely packed continuity, every salient factor and event in Europe's hectic career from the first World War to the present—a composite made from R K O-Pathe news reels of the past 20 years.

Opening with fast, dazzling montage, we glimpse Federal Buildings in Washington, violent bits of the former war, President Wilson speaking, the Armistice. The Versailles Treaty is shown as starting Germany working for revenge, and Italy, Russia, Japan likewise. Economic crash of '29, aggravated by Hawley-Smoot bill, helped by Hull treaties, "Mein Kampf," Hitler as chancellor, Hindenburg dies, Hitler supreme in 1933, and total effort toward war begins, with surrender of household metals and training of children. Review of invasions—Japan in Manchuria, Italy in Ethiopia, Hitler into Rhineland, Spanish Civil War, Czechoslovakia in '37, Munich in '38, Dantzig and Poland in '39. Roosevelt's neutrality proclamation. Russia and Finland, Graf Spee, Denmark and Norway, Churchill's great pronunciamento, Dunkirk, France falls, and Italy and Japan join Axis. Striking scenes of bombed London and Coventry. U. S. Defense Committee, inadequate equipment, sabotage, "fifty destroyers and new bases." Picture plea for defense of all Americas, subversive Bund activities, need for training youth, unison pledge to flag. Hull in South America, Western Hemisphere alliance, Havana agreements, Pan American Union. Forward surge in building and training projects, and Roosevelt's unity speech closes film.

Maps and animation are used effectively throughout the four reels. In such a mass of material, the individual sequences are exceedingly short and follow each other with a swiftness often bewildering unless the spectator is well acquainted with the facts in advance. *The Last Stronghold* is a swift and striking review of a period packed with deeply significant action and event. It recalls, vivifies, and emphasizes a multitude of steps and causes that have led the world to its present tragic state.

Amprosounds are designed especially for School Audio-Visual Projection

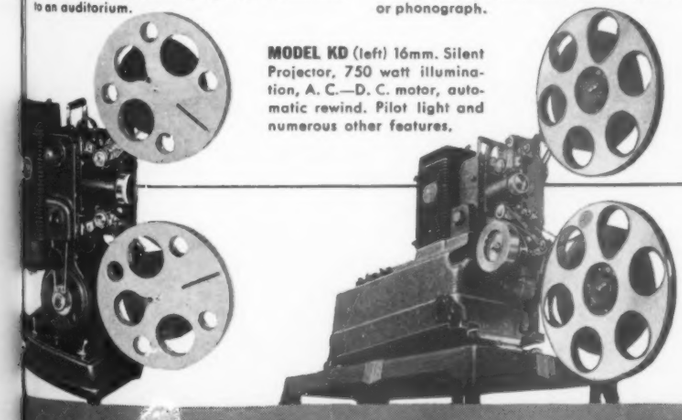




MODEL UA (above) 16mm. Sound-on-Film Projector—offering complete mixing of sound from film, microphone and phonograph—with ample volume for audiences ranging from a classroom to an auditorium.

MODEL YA (below) 16mm. Sound Projector, with 750-1000 watt illumination, A.C.—D.C. motor, silent and sound speeds, offering mixing of sound from film and microphone or phonograph.

MODEL KD (left) 16mm. Silent Projector, 750 watt illumination, A. C.—D. C. motor, automatic rewind. Pilot light and numerous other features.



Teach with Sound Films!

It was not until the invention of the sound motion picture that Equal Educational Opportunities could be provided in such a dynamic manner throughout the schools of America. *Every school*, regardless of size, location, limitation of physical environment or finances, may now provide equal learning opportunities with the aid of Amprosound 16 mm. motion picture projectors. In collaboration with educational film libraries, a program may be planned which will make an outstanding contribution to any school and community. Ampro Educational Dealers are trained especially to provide service and information on all phases of Visual Education.

SEND FOR AMPRO CATALOG

giving full details, descriptions, prices, on the complete line of Ampro 16mm. projectors.

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Please send me FREE Ampro Catalog. I am particularly interested in:

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Among the Producers Where the commercial firms announce new products and developments of interest to the field.

Pictures That Reconstruct the Past

Four years ago Raymond Fideler decided that something should be done about reconstructing the past . . . pictures visualizing the significant aspects of life in colonial days, pioneer days, and in mediaeval and ancient times should be made available to all teachers and students. These pictures should record the past as vividly as modern life is being mirrored by the fine photographs in our journals of today. Unfortunately, the camera is a very modern invention. For visualizing man's progress up until barely ninety years ago, we must depend upon the genius of the artist.

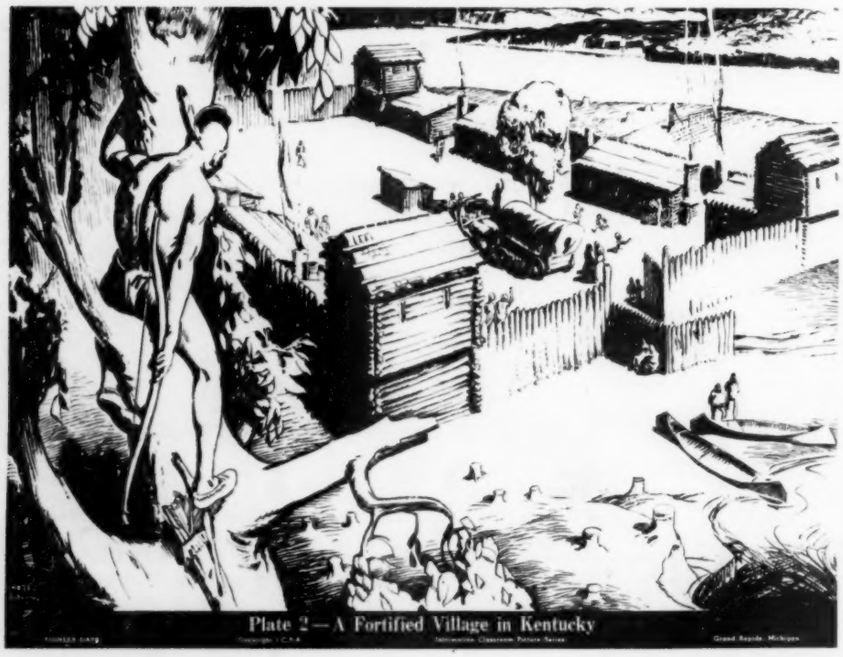
After discussing the idea with hundreds of teachers, supervisors, and superintendents, Mr. Fideler decided to organize the publishing company now known as Informative Classroom Picture Publishers, with offices at Grand Rapids, Michigan. Educators served as curriculum correlation advisors, and an editorial plan was formulated on the basis of ten areas of human experience. These areas included: *Pioneer Days, Life in Colonial America, Indian Life, Knighthood—Life in Mediaeval Times, Early Civilization, Transportation, The Story of Textiles, Community Life,* and *The Farm.* Artists were engaged to visualize the information called for in the various courses of study.

The accompanying picture of a fortified village in Kentucky is typical of these drawings that have been produced, and illustrates two important functions of every picture in this series. It provides the best possible substitute for the complete experience of an actual visit by reconstructing a village typical of hundreds that were built in Kentucky by the early settlers. This is the first purpose of each picture—to visualize some important life problem for which adequate photographs do not exist. The second criteria was that each picture must contain "action."

A page of "functional text," supplying pertinent reference material and written on the child's own level, accompanies each picture. As teachers quickly found that it was often advisable to use parts of several units rather than to use one unit in its entirety, an alphabetical and analytical index was prepared.

Five new units will be available the early part of 1941: *Life in Ancient Greece, Life in Ancient Rome, Americans All, The Age of Voyage and Discovery* and *How Man Has Put Himself on Record.* Plans at present call for the publication of a new set of pictures each ninety days.

Tell the Informative Classroom Picture Publishers of the area of living that you would like to see them visualize. Your suggestions will receive the attention of their curriculum correlation advisors and it is very possible that they can be included in future editorial plans.



Audio-Visual Teaching Aids Shown in New Book

A complete audio-visual service for schools, including electronic devices of every type applicable to classroom use, is contained in a colorful new booklet being announced by Ellsworth C. Dent, RCA Victor Educational Director. Master control sound systems, recording apparatus, RCA Victrola radio-phonographs, public address systems, records, 16mm. sound motion picture projectors, and laboratory apparatus for teaching science, radio and electrical engineering, are among the numerous important educational aids described and pictured.

"The tremendous advances in electronic engineering from the RCA Victor Laboratories, have placed at the disposal of the schools a vast number of new teaching aids in the 30 years since the RCA Victor Educational Department was established to make more general the benefits of recorded aids to teaching," Mr. Dent said. "In the new booklet we have made every effort to show not only the new types and models of equipment, but also the applications of those instruments to make the efforts of the teacher more productive and more enjoyable."

The booklet is available on request from the Educational Department, RCA Manufacturing Company, Inc., Camden, New Jersey.

Illustrated Reference Material for Classrooms

Mr. Henry Skadsheim of Visual Services, Berrien Springs, Michigan, has developed a unique method of making available for convenient classroom use the wealth of valuable illustrated material contained in the pages of the *National Geographic* since 1917. The magazines are broken down into a thousand articles and classified into fifty subject headings, following the Dewey Decimal library system. Nine volumes cover Natural Science, seven cover Travel, three the Social Sciences, and thirty-one the world in Geography.

To provide a permanent, handy method of preserving these articles, they are bound in sturdy illustrated booklets. Each series of booklets is kept in a cloth bound box, made in book style, to be kept on the library shelves for handy reference. They can be used for classroom project work or projected on the screen in the opaque projector.

A Topical Index correlates the contents of the Geographic in topical arrangement, listing the articles chronologically. Another section of the index lists the Natural Science material alphabetically, and an Analytical Section gives a two-way charting of references on each country.

A further outgrowth of this plan is to make materials for binding these pamphlets available to sponsors of Binding and Library Projects. For those wishing missing issues of the Geographic, the Service can supply them. Write to Mr. Skadsheim for complete information.

(*Concluded on page* 94)

THE KEYSTONE FLASHMETER

A Visual Aid That Aids in Teaching

An Interesting Visual Technique Successfully Used —

In Teaching Reading.

In Teaching Spelling.

In Teaching the Reading of Music.

In Teaching Foreign Languages.

Experiments in Remedial Teaching of Spelling Have Produced Remarkable Results.

Further Information or a Special Demonstration Given on Request

Keystone View Company

MEADVILLE, PENNA.

The new Kodak Ektra is shown here with 50mm. f/1.9 lens focusing to 1.5 feet.

New 35mm Kodak Ektra

Heralded as "the world's most distinguished camera," a de luxe 35mm. miniature camera, the Kodak Ektra, is announced by the Eastman Kodak Company, Rochester, who claim the new camera to be without parallel. Designed for the serious worker who prizes quality and precision in photographic equipment, the Ektra includes certain new features never before available in any 35mm. miniature camera in this or any other country. Its design, based on extensive research, aims at the maximum of operating convenience, and unequalled versatility in either amateur or professional use. Six interchangeable lenses are offered incorporating new optical techniques which insure a high quality of performance. Focal lengths range from 35mm. to 153mm., with other lenses to come.

A distinct departure in miniature cameras, the Kodak Ektra is the first to provide both interchangeable lenses and interchangeable Magazine Backs for 35mm. film. These backs enable the Ektra owner to switch from one type of film to another in the middle of a roll, without loss of a single frame. Other outstanding features of the new Ektra include: precise range finder coupling automatically with all focal lengths of Ektra lenses; focal plane shutter of unique precision and stability of performance, with speeds from 1 second to 1/1000; a variable-power view finder which sets by a simple dial for lenses of focal lengths from 50 to 254mm., corrects automatically for parallax; full visibility of all scales and dials from the top of the camera; all operating controls at the finger tips of one hand; rapid film advance and rewind, with a visible indicator actuated by the film itself—providing a sure and accurate check on film movement. Advancing the film simultaneously resets the shutter for another exposure.

These features are in addition to such technical refinements as an automatic exposure counter on the Ektra body and a manual-set exposure indicator on each Magazine Back; a visual signal which shows after each exposure until the film is advanced; positive prevention of accidental double exposures; a velvet-smooth shutter release plunger — absolutely eliminating release shock—with a quick-set lock to prevent accidental release; a delayed-action mechanism for self-portraits and similar work.

Finish of the Kodak Ektra is in thorough accord with the precision of its construction. Metal parts are neatly and compactly designed, and either brush-finished or highly polished. The covering is fine black-morocco leather.

Color Film Slides on Art

A 24-page catalogue on "Masters in Art" has just been issued by Art Education, Inc., 35 West 34th Street, New York City, listing approximately 2000 subjects available from them in color film slides. These 2x2 inch slides mark an epochal development in accurately reproducing paintings, color drawings, watercolors, sculpture and architecture. The collection offers the wealth of the world's famous galleries and private collections, in inexpensive and durable form.

The catalogue lists the slides on "Art Masterpieces of the World" alphabetically by artists. Since many of the subjects have a definite place in Literature, History, Geography, Religion, Folk Lore and other academic studies, symbols designating certain fields are placed after the title. Other slides are classified into Paintings for Juveniles, Architecture, Historic Design, and Miscellaneous.

Poetry Records

The Harvard Film Service announces the publication of the first of a series of recordings of American poets reading their own poems. This series has been prepared under the supervision of Professor F. C. Packard, Jr. of the Department of English. Each record is 12", double-faced, and sells for $2.00, plus postage.

In addition to the recordings made by John Holmes, David McCord, and Robert Hillyer, several by Robert P. Tristram Coffin, Theodore Spencer, John Gould Fletcher, and others, to complete the series, are in preparation. A series of records for the teaching of Appreciation of English Literature will be published in the spring by Harvard Film Service, Harvard University, Cambridge, Mass.

Also reported from Harvard Film Service is the addition of 112 reels of Erpi films and 33 Castle films to their film library this month. These subjects will be available at standard rental rates for single bookings, as well as on a membership plan and in subject matter libraries.

Two B&H Magazine Cameras Now Have 5 Speeds

Taking another step ahead, Bell & Howell, 1801 Larchmont Avenue, Chicago, announce the addition of a fifth speed to the Filmo Auto Master (Turret Head), and the Auto Load Speedster, B&H 16mm. magazine loading cameras. This new speed is 24 frames per second or "sound" speed. Films taken thus may have a sound track "dubbed" in later.

The new speed gives these B&H cameras a speed range of from 16 to 64 frames per second—the normal 16-speed, for general use; 24-speed, for sound to be added later; 32-speed, for shooting from moving vehicles and for fast action shots; 48-speed, for semi-slow motion; and 64-speed, for beautiful, analytical slow motion study. The addition of this important intermediate speed makes for greater flexibility for these popular magazine loaders. There has been no increase in the price of either camera.

A Bit of DeVry History

Time Marches On! From the archives comes this picture taken back in 1918 when the first DeVry sales conference and get-together was held. Today, over 188 DeVry representatives (Audio-Visual Specialists) in all parts of the country are at the service of schools, churches, civic organizations, industry, etc., ready and qualified to extend assistance on any visual education problem. Mr. H. A. DeVry, president of the DeVry Corporation, is third from the left in the back row.

Also for the Visual Field –

"1000 AND ONE" FILM DIRECTORY

"1000 and ONE" The Blue Book of Non-Theatrical Films, published annually is famous in the field of visual instruction as the standard film reference source, indispensable to film users in the educational field. The new edition lists and describes over 5,000 films, classified into 155 different subject groups (including large group of entertainment subjects). A valuable feature is a complete alphabetical list of every film in the directory. Other information includes designation of whether a film is available in 16mm, or 35mm, silent or sound, number of reels and sources distributing the films, with range of prices charged.

132 pp. Paper. Price 75c. (25c to E. S. subscribers)

The FILM EVALUATION SUPPLEMENTS TO "1000 and ONE"

A new, unique, outstanding service to the teaching field—authoritative film evaluations in card-index format.

The first Supplement is ready—presenting, on 50 standard-size library cards, evaluations totalized from multiple judgments of the 50 films most widely used and scored—after actual class use—by the Judging Committee of 500 Teachers under the National Film Evaluation Project. Each succeeding Supplement will carry the next 50 films to attain their quota of Score Cards from the Committee.

Price per Supplement, with full explanations accompanying. 50 cents (postpaid if cash with order.) (Sold only to owners or purchasers of "1000 and ONE Films," 16th edition).

VISUALIZING THE CURRICULUM
By C. F. Hoban, C. F. Hoban, Jr., and S. B. Zisman.

Presents in theory and in practice the basic methodology of visual instruction in relation to classroom procedure. Throughout the text the theory of visual aids is applied to textbook illustration. "Visualizing the Curriculum", itself a splendidly "visualized text", provides an abundance of technical guidance in the form of illustrative drawings of photographs, reports of school journeys, suggestions for mounting materials, for making slides, film strips, etc. It incorporates up-to-date material, provides a fine balance in the treatment of various teaching aids, evaluates various types of aids, and defines the functions and values of each in the learning process.

320 pp. Cloth. Illus. Price **$2.75.** (20% discount to schools)

THE AUDIO-VISUAL HANDBOOK. (3rd Edition)
By Ellsworth C. Dent

Presents in convenient form, practical information for those interested in applying visual and audio-visual aids to instruction. The six chapters include discussions on "The Status of Visual Instruction," "Types of Visual Aids and Their Use," "Types of Audio-Visual Aids to Instruction," "Types of Sound Aids for Schools," "Organizing the Audio-Visual Service," "Source List of Materials and Equipment."

212 pp. Illus. Cloth. Price **$1.50.**

PICTURE VALUES IN EDUCATION
By Joseph J. Weber, Ph. D.

An important contribution to the literature of the visual field. Presents in unusually interesting form the results of extended investigations on the teaching values of the lantern slide and stereograph. 156 pp. Cloth. Illus. Price **$1.00**

(67c to E. S. subscribers)

Full Proceedings of the Midwestern Forum on Visual Aids (Held in Chicago, May 1939)

The most complete record ever printed and on one of the livest visual meetings ever held. Numerous addresses by leading figures in the visual field, a notable Directors' Round Table and ***three complete recordings of classes taught by sound films*** are among the rich contents of the 80-page booklet.

80 pages, Paper. Price **50c.**

(25c to subscribers of Educational Screen)

HOW TO MAKE HAND-MADE LANTERN SLIDES.
By G. E. Hamilton.

Simple directions for making this economical and increasingly popular teaching aid. 24 pp. Paper. Price **10c.**

EVALUATION OF STILL PICTURES FOR INSTRUCTIONAL USE. By Lelia Trolinger

A full presentation of the latest piece of research on determination of teaching values of pictures. Development of the Score Card and elaborate experiment in use of same. Full documentation, tabulation of results, and appendices. **The** latest, most complete and scholarly investigation of a problem in the visual teaching field that has long needed such a solution. 48 pp. Paper. Illus. Price **50c.**

THE EDUCATIONAL TALKING PICTURE
By Frederick L. Devereux.

Presenting preliminary solutions of some of the more important problems encountered in adapting the talking picture to the service of education. The first six chapters deal with the development of fundamental bases of production, with the experimentation which has been conducted, and with suggested problems for future research. The remaining chapters discuss the effective use of the sound film in teaching.

220 pp. Cloth. Illus. Price **$2.00.** (20% discount to schools)

HOW TO USE THE EDUCATIONAL SOUND FILM
By M. R. Brunstetter, Ph. D.

Discusses the utilization of the educational sound film, and lists and illustrates techniques for placing the film into effective service in the classroom. The procedures suggested are based upon extended experience in studying teachers' use of sound films and in helping to organize programs of audio visual instruction in school systems. Two valuable Appendices and a full index.

175 pp. Cloth. Illus. Price **$2.00.** (20% discount to schools)

MOTION PICTURES IN EDUCATION IN THE UNITED STATES. By Cline M. Koon.

A report of the instructional use and indirect educational influence of motion pictures in this country, divided into nine units. Treats the motion picture (1) as an educational influence; (2) in service of health and social hygiene; (3) in governmental service and patriotism; (4) in vocational guidance; (5) in international understanding; (6) Motion picture legislation; (7) technique of production and distribution; (8) systematic introduction of films in teaching; (9) general educational problems of films in teaching.

106 pp. Paper. Price **$1.00** (20% discount to schools)

THE STEREOGRAPH and LANTERN SLIDE IN EDUCATION. By G. E. Hamilton.

The most comprehensive discussion yet published.

47 pp. Paper. Price **15c.**

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"1000 and One" Film Directory	$ .75 ☐	$ .25 ☐
Film Evaluation Supplement	.50 ☐	.50 ☐
Visualizing the Curriculum	2.75 ☐	2.75 ☐
(To Schools)	2.20 ☐	2.20 ☐
The Audio-Visual Handbook	1.50 ☐	1.50 ☐
Picture Values in Education	1.00 ☐	.67 ☐
Proceedings of Mid-West Forum on Visual Aids	.50 ☐	.25 ☐
Evaluation of Still Pictures	.50 ☐	.50 ☐
The Educational Talking Picture	2.00 ☐	2.00 ☐
(To Schools	1.60 ☐	1.60 ☐
How to Use Educational Sound Film	2.00 ☐	2.00 ☐
(To Schools)	1.60 ☐	1.60 ☐
Motion Pictures in Education in The United States	1.00 ☐	1.00 ☐
(To Schools)	.80 ☐	.80 ☐
Stereograph and Lantern Slide in Education	.15 ☐	.15 ☐
How to Make Handmade Lantern Slides	.10 ☐	.10 ☐

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Foreign	1 year, $3.00 ☐	2 years, $5.00 ☐
Canada	1 year, $2.75 ☐	2 years, $4.50 ☐

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1425 Williams St., Denver, Colo.

Audio-Film Libraries (2)
661 Bloomfield Ave., Bloomfield, N. J.
(See advertisement on page 75)

Bailey Film Service (3, 4)
1651 Cosmo St., Hollywood. Cal.

Bald Eagle Films (2)
New Haven, Conn.
(See advertisement on page 86)

Bell & Howell Co. (3)
1815 Larchmont Ave., Chicago
(See advertisement on page 81)

Castle Films (3)
R C A Bldg., New York City
(See advertisement on page 49)

College Film Center (3, 5)
59 E. Van Buren St., Chicago.
(See advertisement on page 85)

DeVry School Films (3, 4)
1111 Armitage Ave., Chicago

Dudley Visual Education Service (1)
736 S. Wabash Ave., Chicago
4th Fl., Coughlan Bldg.
Mankato, Minn.

Eastman Kodak Co. (1)
Teaching Films Division,
Rochester, N. Y.
(See advertisement on page 77)

Eastman Kodak Stores, Inc. (3)
Kodascope Libraries
356 Madison Ave., New York City

Eastman Kodak Stores, Inc. (3)
1020 Chestnut St., Philadelphia, Pa.
606 Wood St., Pittsburgh, Pa.

Edited Pictures System, Inc. (3)
330 W. 42nd St., New York City

Erker Bros. Optical Co.
610 Olive St., St. Louis, Mo.

Erpi Classroom Films, Inc. (2, 5)
35-11 35th Ave., Long Island City, N. Y.
(See advertisement on page 83)

Films, Inc. (3)
330 W. 42nd St., New York City
64 E. Lake St., Chicago
314 S. W. Ninth Ave., Portland, Ore.
(See advertisement on page 52)

Garrison Films (3,6)
1600 Broadway, New York City
(See advertisement on page 76)

General Films, Ltd. (3, 6)
1924 Rose St., Regina, Sask.
156 King St., W. Toronto

Walter O. Gutlohn, Inc. (3)
35 W. 45th St., New York City
(See advertisement on page 87)

Harvard Film Service (3, 6)
Biological Laboratories,
Harvard University, Cambridge, Mass.
(See advertisement on page 78)

Health Film Service (3)
First Nat'l Bank Bldg., Salem, Ore.
(See advertisement on page 80)

Hoffberg Productions, Inc. (2, 5)
1600 Broadway, New York City

Ideal Pictures Corp. (3, 6)
28 E. Eighth St., Chicago, Ill.
(See advertisement on page 45)

International Film Bureau (3, 5)
59 E. Van Buren St., Chicago

International Geographic Pictures (2, 5)
52 Vanderbilt Ave., New York City
(See advertisement on page 87)

Lewis Film Service (3)
105 E. 1st St., Wichita, Kan.
(See advertisement on page 74)

Manse Film Library (2)
1521 Dana Ave., Cincinnati, O.
(See advertisement on page 79)

NonTheatrical Pictures Corp. (3)
165 W. 46th St., New York City
(See advertisement on page 78)

Nu-Art Films, Inc. (3)
145 W. 45th St., New York City
(See advertisement on page 73)

Post Pictures Corp. (3)
723 Seventh Ave., New York City
(See advertisement on page 80)

Douglas D. Rothacker
729 Seventh Ave., New York City
(See advertisement on page 73)

United Educator Films Co. (2)
State Theatre Bldg., Pittsburgh, Pa.
107 South Court, Sq., Memphis, Tenn.

United Projector and Films Corp. (1, 4)
228 Franklin St., Buffalo, N. Y.

Universal Pictures Co., Inc. (5)
Rockefeller Center, New York City
(See advertisement on page 82)

Visual Education Service (3)
131 Clarendon St., Boston, Mass.

Vocational Guidance Films, Inc. (2)
Old Colony Bldg., Des Moines, Ia.
(See advertisement on page 79)

Williams, Brown and Earle, Inc. (3, 6)
918 Chestnut St., Philadelphia, Pa.

Y.M.C.A. Motion Picture Bureau (3)
347 Madison Ave., New York City
19 S. LaSalle St., Chicago
351 Turk St., San Francisco, Cal.
(See advertisement on page 86)

MOTION PICTURE MACHINES and SUPPLIES

The Ampro Corporation (3)
2839 N. Western Ave., Chicago
(See advertisement on page 91)

Bell & Howell Co. (3)
1815 Larchmont Ave., Chicago
(See advertisement on page 81)

DeVry Corporation (3, 6)
1111 Armitage St., Chicago
(See advertisement on inside front cover)

Eastman Kodak Stores, Inc. (3)
Kodascope Libraries
356 Madison Ave., New York City

Eastman Kodak Stores, Inc. (3)
1020 Chestnut St., Philadelphia, Pa.
606 Wood St., Pittsburgh, Pa.

Erker Bros. Optical Co.
610 Olive St., St. Louis, Mo.

General Films, Ltd. (3, 6)
1924 Rose St., Regina, Sask.
156 King St., W. Toronto

Hirsch & Kaye (3)
239 Grant Ave., San Francisco, Cal.

Holmes Projector Co. (3, 6)
1813 Orchard St., Chicago
(See advertisement on page 79)

Ideal Pictures Corp. (3, 6)
28 E. Eighth St., Chicago
(See advertisement on page 45)

Jarrell-Ash Company
165 Newbury St., Boston, Mass.

RCA Manufacturing Co., Inc. (2)
Camden, N. J.
(See advertisement on page 89)

S. O. S. Cinema Supply Corp. (3, 6)
636 Eleventh Ave., New York City

United Educator Films Co. (2)
State Theatre Bldg., Pittsburgh, Pa.
107 South Court, Sq., Memphis, Tenn.

United Projector and Films Corp. (1, 4)
228 Franklin St., Buffalo, N. Y.

Victor Animatograph Corp. (3)
Davenport, Iowa
(See advertisement on page 51)

Visual Education Service (3)
131 Clarendon St., Boston, Mass.

Williams, Brown and Earle, Inc. (3, 6)
918 Chestnut St., Philadelphia, Pa.

PICTURES

Informative Classroom Pictures
44 N. Division Ave., Grand Rapids, Mich.
See advertisement on page 72)

H. Skadsheim, Visual Services
Berrien Springs, Mich.
(See advertisement on page 78)

SCREENS

Da Lite Screen Co.
2717 N. Crawford Ave., Chicago
(See advertisement on inside back cover)

Eastman Kodak Stores, Inc.
1020 Chestnut St., Philadelphia, Pa
606 Wood St., Pittsburgh, Pa.

Erker Bros. Optical Co.
610 Olive St., St. Louis, Mo.

Society for Visual Education, Inc.
100 E. Ohio St., Chicago, Ill.
(See advertisement on outside back cover)

Williams, Brown and Earle, Inc.
918 Chestnut St., Philadelphia, Pa.

SLIDES AND FILM SLIDES

Eastman Educational Slides
303 Greenleaf Ave.,
Wilmette, Ill.

Edited Pictures System, Inc.
330 W. 42nd St., New York City

Erker Bros. Optical Co.
610 Olive St., St. Louis, Mo.

Ideal Pictures Corp.
28 E. Eighth St., Chicago, Ill.
(See advertisement on page 45)

Keystone View Co.
Meadville, Pa.
(See advertisement on page 93)

Dr. Weston A. Price
8926 Euclid Ave., Cincinnati, O.
(See advertisement on page 75)

Radio-Mat Slide Co., Inc.
1819 Broadway, New York City
(See advertisement on page 74)

Society for Visual Education, Inc.,
100 E. Ohio St., Chicago, Ill.
(See advertisement on outside back cover)

Visual Education Service
131 Clarendon St., Boston, Mass.

Visual Sciences
Suffern, New York
(See advertisement on page 74)

Williams, Brown and Earle, Inc.
918 Chestnut St., Philadelphia, Pa

STEREOPTICONS and OPAQUE PROJECTORS

Bausch and Lomb Optical Co.
Rochester, N. Y.
(See advertisement on page 48)

DeVry Corporation
1111 Armitage Ave., Chicago

Eastman Kodak Stores, Inc.
Kodascope Libraries
356 Madison Ave., New York City

Eastman Kodak Stores, Inc.
1020 Chestnut St., Philadelphia, Pa
606 Wood St., Pittsburgh, Pa.

Erker Bros. Optical Co.
610 Olive St., St. Louis, Mo.

General Films Ltd.
1924 Rose St., Regina, Sask.
156 King St., W. Toronto

Hirsch & Kaye
239 Grant Ave., San Francisco, Cal.

Jarrell-Ash Company
165 Newbury St., Boston, Mass.

Society for Visual Education, Inc.
100 E. Ohio St., Chicago, Ill.
(See advertisement on outside back cover)

Spencer Lens Co.
19 Doat St., Buffalo, N. Y.
(See advertisement on page 46)

Williams, Brown and Earl, Inc.
918 Chestnut St., Philadelphia, Pa.

REFERENCE NUMBERS

(1) indicates 16mm silent.
(2) indicates 16mm sound.
(3) indicates 16mm sound and silent.
(4) indicates 35mm silent.
(5) indicates 35mm sound.
(6) Indicates 35mm sound and silent.

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